Model Exam 1

1 Choose the correct answer:

1. Curiosity Rover is designed to explore ....
   a. the Sun b. the moon
   c. Mars d. Earth
2. All the following are extracted from underground, except ....
   a. coal b. charcoal
   c. petroleum d. natural gas
3. Electric wires are made of ....
   a. plastic b. wood
   c. iron d. copper
4. When you rub your hands, kinetic energy changes into .... energy.
   a. light b. sound c. thermal d. chemical

2 Put (✓) or (✗):

1. The produced sound energy helps the hair dryer do its function. (   )
2. Wood is the oldest fuel that has been used by ancient people. (   )
3. Energy can't be changed from one form to another. (   )
4. All types of fuel are extracted from underground. (   )

3 Answer the following questions:

(A) Write the scientific term:

It is the robotic vehicle that explores Mars. (....................)

(B) Give a reason for:

Fossil fuel is considered a nonrenewable resource of energy.

....

Model Exam 2

1 Choose the correct answer:

1. All of the following store chemical energy, except ....
   a. a battery b. an apple
   c. a lamp d. coal
2. .... is a renewable resource of energy.
   a. Oil b. Coal
   c. Gasoline d. Corn
3. The produced .... energy doesn't help the blender do its job.
   a. sound b. kinetic
   c. chemical d. potential
4. .... is the oldest fuel that has been used by ancient people.
   a. Coal b. Oil c. Wood d. Charcoal

2 Put (✓) or (✗):

1. Mars Rover and toy cars can be operated from a distance. (   )
2. Some plants are used to make liquid biofuel. (   )
3. Most energy chains start with the moon. (   )
4. Short trips consume more fuel than long trips. (   )

3 Answer the following questions:

(A) Write the scientific term:

It is a material that releases thermal energy upon burning.

(....................................)

(B) Give a reason for:

The sound energy seems to be lost energy in the hair dryer.

....

Model Exam 3

1 Choose the correct answer:

1. During riding a bike, some kinetic energy is converted into .... energy due to the friction of the bike's tires with the road.
   a. chemical b. potential c. thermal d. electrical
2. .... takes millions of years to be formed.
   a. Coal b. Charcoal c. Wood d. Corn
3. .... is considered the main source of energy on the Earth's surface.
   a. Fuel b. The moon c. The Sun d. A battery
4. One of the disadvantages of overusing biofuel is ....
   a. decomposition b. deforestation c. rain d. wildfires

2 Put (✓) or (✗):

1. Both the electric bulb and the electric heater produce thermal energy. ( )
2. Fossil fuel is made from living things that can be grown. ( )
3. When pedaling a bike, the chemical energy in your body changes to kinetic energy. ( )
4. There is stored chemical energy inside the food we eat. ( )

3 Answer the following questions:

(A) Write the scientific term:

It is the fuel that is made from living organisms that can be planted. (....................)

(B) Give a reason for:

The batteries used in the toys cannot be used to charge the Curiosity Rover.

....

Model Exam 4

1 Choose the correct answer:

1. All the following devices produce thermal energy, except the ....
   a. hair dryer
   b. watch
   c. kettle
   d. electric heater
2. On heating water, it turns into ....
   a. steam
   b. ice
   c. electricity
   d. fuel
3. When you turn on your television, the electrical energy travels through the .... until it reaches the television.
   a. wires
   b. air
   c. screens
   d. plastics
4. .... is considered as a type of biofuel.
   a. Coal
   b. Oil
   c. Wood
   d. Natural gas

2 Correct the underlined words:

1. Sound energy is the lost energy in a computer. (....................)
2. The energy chain always starts with the moon. (....................)
3. Coal stores thermal energy. (....................)
4. Plants convert the light energy coming from the Sun into the kinetic energy stored in the sugar. (....................)

3 Answer the following questions:

(A) Write the scientific term:

It is the energy consumed in the device. (....................)

(B) What happens if:

The remains of plants decompose over millions of years?

....

Model Exam 5

1 Choose the correct answer:

1. During charging a mobile phone, the .... energy is stored in the battery as .... energy.
   a. chemical - electrical b. electrical - chemical
   c. electrical - sound d. chemical - light
2. If we are going on a long road trip, we must check the ....
   a. seats b. doors
   c. speedometer d. gasoline pointer
3. The .... uses thermal energy to do its function.
   a. mobile phone b. washing machine
   c. TV d. hair dryer
4. Fuel is used as a source of .... energy.
   a. thermal b. chemical c. light d. solar

2 Put (✓) or (✗):

1. The amount of electrical energy used to charge a mobile phone is greater than the produced light energy. ( )
2. We cannot drive a car if the gasoline inside the fuel tank runs out. ( )
3. Thermal energy is produced by burning a piece of wood. ( )
4. It is easy to replace the batteries of the Curiosity Rover. ( )

3 Answer the following questions:

(A) Write the scientific term:

It is the energy that helps a light bulb do its main job. (....................)

(B) What happens if:

We cut down trees at a fast rate to get wood?

....

Answers

Model Exam 1

1 1 c 2 b 3 d 4 c

2 1 ✗ 2 ✓ 3 ✗ 4 ✗

3 (A) Mars Curiosity Rover

(B) Because it starts to run out as we use it, and it can't be renewed easily.

Model Exam 2

1 1 c 2 d 3 a 4 c

2 1 ✓ 2 ✓ 3 ✗ 4 ✗

3 (A) Fuel

(B) Because sound energy doesn't help the hair dryer to do its main job.

Model Exam 3

1 1 c 2 a 3 c 4 b

2 1 ✓ 2 ✗ 3 ✓ 4 ✓

3 (A) Biofuel

(B) Because Mars Curiosity Rover is very far from any store or any plug.

Model Exam 4

1 1 b 2 a 3 a 4 c

2 1 Thermal 2 Sun 3 chemical 4 chemical

3 (A) Input energy

(B) Coal will be formed.

Model Exam 5

1 1 b 2 d 3 d 4 a

2 1 ✓ 2 ✓ 3 ✓ 4 ✗

3 (A) Light energy

(B) This leads to deforestation.

Exams 2024

Model (1)

15 Marks

1 Choose the correct answer:

1. .... is the input form of energy used to operate the television.

   a) Thermal energy　　b) Sound energy

   c) Electrical energy　　d) Light energy

2. Curiosity rover uses .... to operate while exploring Mars.

   a) solar energy　　b) electricity　　c) long lasting batteries　　d) (a) and (c)

3. All the following actions don't conserve electrical energy, except ....

   a) unplugging unused electrical devices

   b) plugging many unused electrical devices

   c) turning on all the house lights all the day long

   d) leaving the television turned on all the day

2 Complete the following sentences from the words between brackets:

1. The electric stove uses .... (electrical – thermal) energy, while the solar stove produces .... (light – thermal) energy.

2. .... is produced from dead marine animals. (Oil – Charcoal)

3. Energy produced from fossil fuel is .... expensive than using renewable resources. (less – more)

3 (A) Give a reason for:

- Sound energy that is produced from an operating machine is wasted.

  - ....

(B) What happens when ...?

- Humans increase using the wood of trees as a source of fuel.

  - ....

Model (2)


15 Marks

1 Choose the correct answer:

1. The cell phone converts chemical energy into .... energy, and .... energy.

   a) sound, light   b) chemical, thermal   c) potential, light   d) thermal, potential

2. What happens to the energy that is not used in a device?

   a) It isn't converted into a different form of energy.

   b) It is stored for later use.

   c) It is released as waste heat or sound.

   d) It is transferred to another device.

3. All the following are non-renewable sources of energy, except ....

   a) coal   b) water   c) gasoline   d) natural gas

2 Complete the following sentences from the words between brackets:

1. The lost form of energy in an electric sharpener is .... energy. (thermal – kinetic)

2. When people decrease the burning of fossil fuels, the percentage of carbon dioxide .... (increases – decreases)

3. An increase in the burning of fossil fuels causes .... (acid rains – thunder)

3 (A) Write the scientific term:

- A gas fuel is formed from the decomposition of remains of marine animals under the Earth's surface.

(B) Give a reason for:

- There is no device that can completely use its input energy.

  - ....

Model (3)

15 Marks

1 Complete the following sentences from the words between brackets:

1. During cooking food, coal stores .... energy. (thermal – chemical)
2. The burning of coal and oil produces .... gas. (carbon dioxide – oxygen)
3. Acid rain is formed when .... combines with rain water. (carbon dioxide – oxygen)

2 Put (✓) or (✗):

1. When you put on the brakes of a bicycle, the friction causes some of the mechanical energy to be lost in the form of thermal energy. (   )
2. Pesticides used in farms are mixed with water, which causes water pollution. (   )
3. The potential energy operates the electric generator. (   )

3 What happens when ...s?

1. You rub your hands together. (Regarding energy conversion)
   - ....
2. The remains of dead living organisms were buried under the Earth's surface over millions of years.
   - ....

١٥ درجة Science Model (4) 15 Marks

1 Choose the correct answer:

1. Which of the following chains best describes the energy transformations that occur when a flashlight that is powered by batteries is turned on?

   a) chemical → light → electrical b) electrical → light → chemical

   c) light → electrical → chemical d) chemical → electrical → light

2. Inside the electric power station, heating of .... produces steam.

   a) turbines b) generator c) water d) fuel

3. Smog emitted from automobile exhaust causes all of the following, except ....

   a) damaging the tissues of the respiratory system

   b) irritation of the eyes

   c) lungs irritation

   d) the maintenance of the nervous system

2 Complete the following sentences from the words between brackets:

1. In a battery of a toy car, ... energy is changed into electrical energy. (chemical – sound)
2. Curiosity rover is designed to explore .... (Mars – the moon)
3. .... can be used to make liquid fuel. (Corn – Charcoal)

3 (A) Give a reason for:

- Wind and water are considered as renewable sources of energy.

  - ....

(B) What happens when ...?

- Switch on an electric lamp. (Regarding the energy conversion)

  - ....

Model (5)

15 Marks

1 Choose the correct answer:

1. Thermal energy is produced during riding a bike when the tires touch the ground due to ....

   a) friction　　b) energy　　c) air resistance　　d) water resistance

2. All the following are from the types of fossil fuel, except ....

   a) natural gas　　b) coal　　c) oil　　d) charcoal

3. Remains of living organisms that were buried under the Earth's surface must be affected by .... to form fossil fuel.

   a) low pressure and high temperature　　b) high pressure and high temperature

   c) high pressure and low temperature　　d) low pressure and low temperature

2 Complete the following sentences from the words between brackets:

1. .... is a phenomenon in which the Earth's temperature increases, when carbon dioxide gas increases in air. (Global warming – Smog)

2. A calculator is powered by a solar cell that uses .... energy which transforms into electrical energy. (light – thermal)

3. .... is the main source of biofuel. (The Sun – Water)

3 (A) Give a reason for:

- Charcoal is a biofuel.

  - ....

(B) What is the difference between ...?

- A solar heater and an electric heater. (Regarding the input form of energy)

  - ....

Model (1)

15 Marks

1 Choose the correct answer:

1. ………………… is the input form of energy used to operate the television.

   a) Thermal energy b) Sound energy

   c) Electrical energy d) Light energy

2. Curiosity rover uses ………………… to operate while exploring Mars.

   a) solar energy b) electricity c) long lasting batteries d) (a) and (c)

3. All the following actions don't conserve electrical energy, except ………………… .

   a) unplugging unused electrical devices

   b) plugging many unused electrical devices

   c) turning on all the house lights all the day long

   d) leaving the television turned on all the day

2 Complete the following sentences from the words between brackets:

1. The electric stove uses ………………… (electrical – thermal) energy, while the solar stove produces ………………… (light – thermal) energy.

2. ………………… is produced from dead marine animals. (Oil – Charcoal)

3. Energy produced from fossil fuel is ………………… expensive than using renewable resources. (less – more)

3 (A) Give a reason for:

- Sound energy that is produced from an operating machine is wasted.

  - Because it doesn't serve its function.

(B) What happens when ...?

- Humans increase using the wood of trees as a source of fuel.

  - It will lead to the removal of forests (deforestation) and affect the environment in a negative way.

Model (2)

15 Marks

1 Choose the correct answer:

1. The cell phone converts chemical energy into .... energy, and .... energy.

   a) sound, light b) chemical, thermal c) potential, light d) thermal, potential

2. What happens to the energy that is not used in a device?

   a) It isn't converted into a different form of energy.

   b) It is stored for later use.

   c) It is released as waste heat or sound.

   d) It is transferred to another device.

3. All the following are non-renewable sources of energy, except ....

   a) coal b) water c) gasoline d) natural gas

2 Complete the following sentences from the words between brackets:

1. The lost form of energy in an electric sharpener is .... energy. (thermal – kinetic)
2. When people decrease the burning of fossil fuels, the percentage of carbon dioxide .... (increases – decreases)
3. An increase in the burning of fossil fuels causes .... (acid rains – thunder)

3 (A) Write the scientific term:

- A gas fuel is formed from the decomposition of remains of marine animals under the Earth's surface. (Natural gas)

(B) Give a reason for:

- There is no device that can completely use its input energy.
  - Because part of the input energy is converted into wasted energy in the form of heat and sound that don't serve the function of the device.

Model (3)

15 Marks

1 Complete the following sentences from the words between brackets:

1. During cooking food, coal stores .... energy. (thermal – chemical)
2. The burning of coal and oil produces .... gas. (carbon dioxide – oxygen)
3. Acid rain is formed when .... combines with rain water. (carbon dioxide – oxygen)

2 Put (✓) or (✗):

1. When you put on the brakes of a bicycle, the friction causes some of the mechanical energy to be lost in the form of thermal energy. (✓)
2. Pesticides used in farms are mixed with water, which causes water pollution. (✓)
3. The potential energy operates the electric generator. (✗)

3 What happens when ...s?

1. You rub your hands together. (Regarding energy conversion)

   - Kinetic energy is converted into thermal energy due to friction.

2. The remains of dead living organisms were buried under the Earth's surface over millions of years.

   - The buried remains changed to become coal, oil, and natural gas.

Model (4)

15 Marks

1 Choose the correct answer:

1. Which of the following chains best describes the energy transformations that occur when a flashlight that is powered by batteries is turned on?

   a) chemical → light → electrical
   b) electrical → light → chemical
   c) light → electrical → chemical
   d) chemical → electrical → light

2. Inside the electric power station, heating of .... produces steam.

   a) turbines
   b) generator
   c) water
   d) fuel

3. Smog emitted from automobile exhaust causes all of the following, except ....

   a) damaging the tissues of the respiratory system
   b) irritation of the eyes
   c) lungs irritation
   d) the maintenance of the nervous system

2 Complete the following sentences from the words between brackets:

1. In a battery of a toy car, ... energy is changed into electrical energy. (chemical – sound)
2. Curiosity rover is designed to explore .... (Mars – the moon)
3. .... can be used to make liquid fuel. (Corn – Charcoal)

3 (A) Give a reason for:

- Wind and water are considered as renewable sources of energy.

  - Because they are natural materials that can be renewed soon after using them.

(B) What happens when ...?

- Switch on an electric lamp. (Regarding the energy conversion)

  - Electrical energy is converted into light energy and wasted thermal energy.

Model (5)

15 Marks

1 Choose the correct answer:

1. Thermal energy is produced during riding a bike when the tires touch the ground due to ....

   a) friction   b) energy   c) air resistance   d) water resistance

2. All the following are from the types of fossil fuel, except ....

   a) natural gas   b) coal   c) oil   d) charcoal

3. Remains of living organisms that were buried under the Earth's surface must be affected by .... to form fossil fuel.

   a) low pressure and high temperature   b) high pressure and high temperature

   c) high pressure and low temperature   d) low pressure and low temperature

2 Complete the following sentences from the words between brackets:

1. .... is a phenomenon in which the Earth's temperature increases, when carbon dioxide gas increases in air. (Global warming – Smog)

2. A calculator is powered by a solar cell that uses .... energy which transforms into electrical energy. (light – thermal)

3. .... is the main source of biofuel. (The Sun – Water)

3 (A) Give a reason for:

- Charcoal is a biofuel.

  - Because it is resulted from living organisms "plants" that can be cultivated.

(B) What is the difference between ...?

- A solar heater and an electric heater. (Regarding the input form of energy)

  - Solar heater uses (input energy) light energy coming from the Sun, while the electric heater uses (input energy) electrical energy.

Exams 2023

Model (1)





Choose the correct answer:

1. The energy chain of an operating electric oven is ....

   "Knowing that the electric power plant is powered by fossils".

   a. Mechanical → Chemical → Electrical

   b. Chemical → Sound → Electrical

   c. Chemical → Electrical → Thermal

   d. Electrical → Thermal → Sound

2. From the factors that help in the formation of fossil fuels are ....

   a. the decomposition of the dead living organisms

   b. building up of sediments

   c. pressure and heat

   d. All the previous answers

3. Which of the following is not a fossil fuel?

   a. Coal. b. Electricity.

   c. Oil. d. Natural Gas.

4. We can use the energy obtained from burning of wood in all of the following situations, except ....

   a. warming houses b. operating television

   c. cooking food d. boiling water

5. Oil and water are from energy resources. Which statement is correct?

   a. Oil and water don't mix.

   b. Oil and water are non-renewable sources.

   c. Oil and water are renewable resources.

   d. Oil and water have the same composition.

Model (2)



Choose the correct answer:

1. When a lamp is plugged in, it generates .... energy, which is converted into .... energy when the light is turned on.

   a. sound, energy
   b. light, energy
   c. electrical, light
   d. kinetic, energy

2. According to the Law of Conservation of Energy, energy cannot be .... or ....

   a. destroyed, destroyed
   b. created, saved
   c. created, destroyed
   d. lost, found

3. Which one of these characteristics does not represent fossil fuels?

   a. Polluting the environment.
   b. They are consumed at a faster rate than the rate of their formation.
   c. They are consumed at a slower rate than the rate of their formation.
   d. They are formed from the decomposition of the remains of living organisms.

4. Coal comes from ....

   a. animals that died millions of years ago
   b. plants that died millions of years ago
   c. factories
   d. burning fossil fuels

5. Oil was formed from the decomposition of ....

   a. sea creatures
   b. wood
   c. plastic
   d. trees

Model (3)



Choose the correct answer:

1. Which of the following chains best describes the energy transformations that occur when a flashlight powered by batteries is turned on?

a. chemical → light → electrical
b. electrical → light → chemical
c. light → electrical → chemical
d. chemical → electrical → light

2. The cell phone converts chemical energy into .... energy, and .... energy.

a. sound, light
b. chemical, thermal
c. potential, light
d. thermal, potential

3. All of the following are from the actions that don't conserve electrical energy, except ....

a. unplugging unused electrical appliances
b. leaving the television turned on
c. plugging the unused electric appliances
d. No correct answer

4. All of the following are from biofuels, except ....

a. wood
b. switch grass
c. corn
d. coal

5. After eating food, the body converts .... energy into .... energy during playing.

a. chemical, kinetic
b. chemical, light
c. kinetic, chemical
d. sound, thermal

Model (4)



Choose the correct answer:

1. All of the following are from the renewable energy sources, except ....

a. water   b. oil   c. biofuels   d. sunlight

2. Mars rover "Curiosity" converts .... energy into ....

a. sound, light energy   b. solar, electrical and kinetic energy

c. chemical, light   d. thermal, potential

3. The sound energy produced from an operating vacuum cleaner is wasted because ....

a. it helps it do its function   b. it doesn't help it do its function

c. it is an input energy   d. No correct answer

4. Biofuels are ....

a. renewable resources   b. non-renewable resources

c. made from cultivated plants   d. Both (a) and (c)

5. Most of electricity generated in Egypt is from ....

a. fossil fuels   b. biofuels

c. solar energy   d. water

Model (5)



Choose the correct answer:

1. Batteries store .... energy that is converted into .... energy.

   a. chemical, electrical b. electrical, chemical

   c. light, chemical d. electrical, light

2. The amount of electrical energy entering a lamp is .... the amount of light energy produced from it

   a. equal to b. more than c. less than d. smaller than

3. Water is conserved by ....

   a. growing plants that need irrigation water in small quantities

   b. opening water tapes

   c. growing plants that need irrigation water in large quantities

   d. No correct answer

4. All of the following are from the produced energies from a washing machine, except ....

   a. sound b. thermal c. kinetic d. light

5. Thermal and sound energies that are produced due to the friction between the car tires and the ground are ....

   a. input forms of energy that are necessary to operate the car

   b. lost forms of energy when the car operates

   c. not from the energy chain of the car's operation

   d. equal to the input forms of energy during fuel combustion

Model (1) Answers



Choose the correct answer:

1. The energy chain of an operating electric oven is ....
"Knowing that the electric power plant is powered by fossils".
a. Mechanical → Chemical → Electrical
b. Chemical → Sound → Electrical
c. Chemical → Electrical → Thermal
d. Electrical → Thermal → Sound

2. From the factors that help in the formation of fossil fuels are ....
a. the decomposition of the dead living organisms
b. building up of sediments
c. pressure and heat
d. All the previous answers

3. Which of the following is not a fossil fuel?
a. Coal.
b. Electricity.
c. Oil.
d. Natural Gas.

4. We can use the energy obtained from burning of wood in all of the following situations, except ....
a. warming houses
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5. Oil and water are from energy resources. Which statement is correct?
a. Oil and water don't mix.
b. Oil and water are non-renewable sources.
c. Oil and water are renewable resources.
d. Oil and water have the same composition.

Model (2) Answers



Choose the correct answer:

1. When a lamp is plugged in, it generates .... energy, which is converted into .... energy when the light is turned on.

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   b. light, energy
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   d. kinetic, energy

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   d. burning fossil fuels

5. Oil was formed from the decomposition of ....

   a. sea creatures
   b. wood
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   d. trees

Model (3) Answers



Choose the correct answer:

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a. chemical → light → electrical
b. electrical → light → chemical
c. light → electrical → chemical
d. chemical → electrical → light

2. The cell phone converts chemical energy into .... energy, and .... energy.

a. sound, light
b. chemical, thermal
c. potential, light
d. thermal, potential

3. All of the following are from the actions that don't conserve electrical energy, except ....

a. unplugging unused electrical appliances
b. leaving the television turned on
c. plugging the unused electric appliances
d. No correct answer

4. All of the following are from biofuels, except ....

a. wood
b. switch grass
c. corn
d. coal

5. After eating food, the body converts .... energy into .... energy during playing.

a. chemical, kinetic
b. chemical, light
c. kinetic, chemical
d. sound, thermal

Model (4) Answers



Choose the correct answer:

1. All of the following are from the renewable energy sources, except ....

a. water b. oil c. biofuels d. sunlight

2. Mars rover "Curiosity" converts .... energy into ....

a. sound, light energy b. solar, electrical and kinetic energy

c. chemical, light d. thermal, potential

3. The sound energy produced from an operating vacuum cleaner is wasted because ....

a. it helps it do its function b. it doesn't help it do its function

c. it is an input energy d. No correct answer

4. Biofuels are ....

a. renewable resources b. non-renewable resources

c. made from cultivated plants d. Both (a) and (c)

5. Most of electricity generated in Egypt is from ....

a. fossil fuels b. biofuels

c. solar energy d. water

Model (5) Answers



Choose the correct answer:

1. Batteries store .... energy that is converted into .... energy.

   a. chemical, electrical
   b. electrical, chemical
   c. light, chemical
   d. electrical, light

2. The amount of electrical energy entering a lamp is .... the amount of light energy produced from it

   a. equal to
   b. more than
   c. less than
   d. smaller than

3. Water is conserved by ....

   a. growing plants that need irrigation water in small quantities
   b. opening water tapes
   c. growing plants that need irrigation water in large quantities
   d. No correct answer

4. All of the following are from the produced energies from a washing machine, except ....

   a. sound
   b. thermal
   c. kinetic
   d. light

5. Thermal and sound energies that are produced due to the friction between the car tires and the ground are ....

   a. input forms of energy that are necessary to operate the car
   b. lost forms of energy when the car operates
   c. not from the energy chain of the car's operation
   d. equal to the input forms of energy during fuel combustion

Test 1

Total mark .... / 15

Choose the correct answer :

1. The energy source in a toy car is the ....
   (a) engine. (b) tires. (c) battery. (d) fuel.

2. While playing a guitar, ... energy is converted into sound energy.
   (a) kinetic (b) light (c) chemical (d) potential

3. Coal was formed under the Earth's surface from the remains of ....
   (a) dead animals. (b) dead plants. (c) dead humans. (d) dead insects.

4. All the following can be used to generate electrical energy, except ....
   (a) oil. (b) natural gas. (c) water. (d) glass.

5. Which form of energy is not used or produced when you turn on an electric bulb ? ....
   (a) Electrical. (b) Light. (c) Thermal. (d) Sound.

Test 2

Total mark .... / 15

Choose the correct answer :

1. Curiosity rover is designed to explore ....
   (a) Earth. (b) Mars. (c) the Sun. (d) the moon.

2. When the switch of an electric bell is pushed, the .... energy is produced.
   (a) electrical (b) light (c) thermal (d) sound

3. Ancient people used .... as a fuel before discovering gasoline.
   (a) wood (b) water (c) wind (d) electricity

4. Inside the electric power station, heating of .... produces steam.
   (a) turbines (b) generators (c) water (d) fuel

5. In the electric water kettle, electrical energy is converted into .... energy that can warm the cold water inside it.
   (a) sound (b) thermal (c) light (d) kinetic

Test 3



Choose the correct answer :

1. You feel warm when you rub your hands together, because .... energy is converted into thermal energy.
   (a) kinetic (b) light (c) electrical (d) sound

2. We can use the energy obtained from burning of wood directly for all of the following purposes, except ....
   (a) warming houses. (b) operating television.
   (c) cooking food. (d) boiling water.

3. Sound and .... energies are output energies when operating the mobile phone.
   (a) electrical (b) potential (c) chemical (d) light

4. The steps of forming fossil fuel don't include .... of the remains of the living organisms.
   (a) decaying (b) cooling (c) burying (d) heating

5. Both coal and charcoal ....
   (a) are renewable resources of energy. (b) are nonrenewable resources of energy.
   (c) are examples of biofuel. (d) produce thermal energy on burning.

Test 4

Total mark
15

Choose the correct answer :

1. In the battery of a toy car .... energy is converted into electrical energy.
   (a) chemical (b) sound (c) light (d) thermal

2. When a football player runs, the chemical energy inside his body is converted into .... and .... energies.
   (a) potential – light. (b) kinetic – light. (c) thermal – kinetic. (d) thermal – light.

3. It takes several .... for a spacecraft to travel from Earh to Mars.
   (a) seconds (b) minutes (c) days (d) months

4. Smog causes irritation of .... of humans.
   (a) stomach and eyes (b) eyes and lungs (c) small intestine (d) large intestine

5. Wood is considered as ....
   (a) biofuel. (b) fossil fuel. (c) liquid fuel. (d) gaseous fuel.

Test 5

Total mark 15

Choose the correct answer :

1. Some kinetic energy is converted into .... energy due to friction of bike's tire with the road.

   ⓐ light ⓑ electrical ⓒ potential ⓓ thermal

2. The produced .... energy does not help the blender do its job.

   ⓐ chemical ⓑ sound ⓒ light ⓓ potential

3. We can use the energy that is produced from .... to generate electrical energy.

   ⓐ renewable resources only
   ⓑ nonrenewable resources only
   ⓒ renewable and nonrenewable resources
   ⓓ food including fruits and vegetables

4. All the following are forms of fossil fuels, except ....

   ⓐ water. ⓑ coal. ⓒ natural gas. ⓓ oil.

5. Nonrenewable resources of energy take .... to be formed.

   ⓐ a short period of time
   ⓑ a very long period of time
   ⓒ few minutes
   ⓓ few hours

Answers of Test 1

1 (c) 2 (a) 3 (b) 4 (d) 5 (d)

Answers of Test 2

1 (b) 2 (d) 3 (a) 4 (c) 5 (b)

Answers of Test 3

1 (a) 2 (b) 3 (d) 4 (b) 5 (d)

Answers of Test 4

1 (a) 2 (c) 3 (d) 4 (b) 5 (a)

Answers of Test 5

1 (d) 2 (b) 3 (c) 4 (a) 5 (b)




February Questions Bank

CONCEPT 3.1

Question 01 choose the corret answer

1. The energy source in a toy car is the ....

   (a) engine (b) tires (c) battery (d) fuel

   (suez 2023)

2. The idea of design and work of the robot that explores the surface of Mars depends on the idea of transforming ....

   (a) electric to kinetic (b) potential to kinetic (c) light to electric (d) kinetic to electric

   School book

3. In a battery of a toy car .... energy changes into electrical energy

   (a) chemical (b) sound (c) thermal (d) kinetic

   (Alex: montaza zone 2022)

4. Curiosity rover is designed to explore ....

   (a) Mars planet (b) the Moon (c) the sun (d) Earth planet

   (Alex.– Al Montaza zone(2)2023)

5. The .... on the rover curiosity convert solar energy into ...... energy which is used to change its batteries

   (a) Solar panels – electrical (b) Batteries – electrical (c) Solar panels – sound (d) Batteries – sound

   (alex. 2023)

6. The output energy in the Mars exploration vehicle is .... energy.

   (a) electrical (b) light (c) kinetic (d) solar

   (Menoufia 2023)

7. By rubbing hands .... energy is changed into thermal energy.

   (a) chemical (b) kinetic (c) sound (d) potential

   (Cairo . Rod El Farag2023)

8. A plugged-in lamp can turn .... energy to............. energy.

   (a) electrical, light (b) kinetic, light (c) chemical, light (d) chemical, heat

   (Ministry models 2022)

9. In the washing machine the .... energy is converted into kinetic and sound energy.
   a. thermal b. electrical c. light d. potential
   (Giza: Dokki Zone2023)

10. When you use the hand bell, the .... energy changed into sound energy.
    a. Electrical b. potential c. thermal d. kinetic
    (Ministry models 2022)

11. Energy produced from the electric bulb is .... energy.
    a. chemical b. sound c. light d. kinetic
    (El-Behira: Kafr El-Dawar 2023)

12. The output energy when playing drums is the .... energy.
    a. chemical b. light c. sound d. potential
    (Minia: Bani Mazar 2023)

13. The input energy when using the lamp is the .... energy.
    a. electrical b. potential c. kinetic d. thermal
    (Minia: Bani Mazar 2023)

14. Energy doesn't destroy, nor create from nothing, this indicates ....
    a. the draining of energy resources
    b. conservation and transformation of energy
    c. resources of energy are numerous
    d. destroying the energy resources
    School book

15. During riding a bike, some kinetic energy is converted into .... energy due to friction of bike's tire with the road.
    a. chemical b. potential c. thermal d. electrical
    (Ministry models 2022)

16. The produced energy from radio that reflects its main function is .... energy
    a. electric b. sound c. light d. chemical
    (Cairo: Heliopolis2023

17. Input energy when using the hair dryer is .... energy.
    a. electrical b. potential c. light d. kinetic
    (Cairo: El Waily Zone2023)

18. The output energy when using the hair dryers is the .... energy.
    a. electrical b. potential c. light d. thermal

19. The output energy that is not from the job of hair dryer is ....
   - a. chemical
   - b. sound
   - c. kinetic
   - d. light

(Ismailia: Inspectorate2023)

20. The unusable energy that produced from the electric lamp .... energy
   - a. potential
   - b. chemical
   - c. thermal
   - d. light

(Cairo: El Nozha2023)

21. The wasted energy in most devices in the form of .... energy.
   - a. electric
   - b. thermal
   - c. sound
   - d. kinetic

(Menoufia 2023)

22. Both hair dryer and electric water kettle produce .... energy.
   - a. thermal
   - b. light
   - c. electric
   - d. potential

(Alex: montaza zone 2022)

23. The stored energy inside the battery of a mobile phone is............... energy
   - a. electrical
   - b. light
   - c. chemical
   - d. sound

(Alex: montaza zone 2023)

Question 02 put (true) or (false)

1. Mars is located a few meters away from Earth. ( )
(Alex: montaza zone 2022)
2. Mars Curiosity can be operated from a distance ( )
(Ministry models 2022)
3. A toy car can continue moving even after its battery runs out. ( )
(Giza: Dokki Zone2023)
4. Rover Curiosity is used to explore the Jupiter. ( )
(Alex. Al Montaza zone1)
5. Chemical energy is the energy that stored in food and battery. ( )
(Cairo . Rod El Farag2023)
6. Energy may be destroyed inside different devices. ( )
(Cairo: El Waily Zone2023)
7. Most of energy chains start with the moon ( )
(Giza: Agoza Zone2023)
8. There is a stored chemical energy inside the food we eat. ( )
(Giza: Agoza Zone2023)

9. Energy cannot be transformed from one form to another ( )
(Alex: montaza zone 2022)

10. Both electric bulb and electric heater produce thermal energy. ( )
(Alex: East zone 2022)

11. The energy chain of a burning candle is chemical energy converted into thermal energy & light energy ( )
(Giza 2022)

12. When pedalling a bike, the chemical energy in your body change to kinetic energy ( )
(Minia: Bani Mazar 2022)

13. Plants need sunlight to grow ( )
(Ministry models 2022)

14. The produced sound energy helps the hair dryer to do its function. ( )
(Ministry models 2022)

Question 03 Correct the underline words

1. Curiosity is a robotic vehicle that is designed to explore the surface of the <u>moon</u>. ( )
(Giza: Agoza Zone2023)

2. <u>Thermal</u> energy used to play a drum ( )
(Ministry models 2022)

3. To operate an electric mixer, we use <u>sound</u> energy ( )
(Ministry models 2022)

4. <u>Light</u> energy is stored inside the battery of mobile phone. ( )
(Qena: Science Inspectorate2023)

Question 04 Complete the following sentences

1. On Mars planet, Curiosity robot can be operated for a long period of time by using ....energy from sunlight that is converted into ....energy used to recharge its batteries
(Cairo - Zeitoun Zone 2023)

2. Solar panels are used to generate ....energy
(Ismailia: Inspectorate2023)



3. Most of the energy we use is produces inside the ....
(Ismailia: Inspectorate2022)

4. The energy that is produced from the battery and used to operate a toy car is .... energy.
(Alex: East zone 2022)

5. Light energy is converted into .... energy which is stored in the form of sugar inside the trees.
(Dakahlia: 2023)

6. .... is the main source of energy on the Earth's surface.
(Dakahlia: 2023)

7. Energy can neither be .... nor ...., but only .... from one form to another
(Cairo 2023)

8. To operate an electric mixer, we use .... energy.
(Alex: East zone 2022)

9. The electric lamp converts .... energy into light and heat energy.
(Alex: East zone 2022)

10. The energy can be .... from one form to another
(Cairo: El Waily Zone2023)

11. In hand bell, kinetic energy is converted into .... energy.
(Alexandria: Middle Zone2023)

12. In the washing machine electrical energy converted into .... energy.
(Suez: South Zone2023)

13. When you ride a bicycle, the .... energy stored in your body is converted into .... energy which causes the bicycle to move
(Behaira 2022)

14. Energy produced from the radio which helps the device do its main function is .... energy
(El-Behira: Kafr El-Dawar 2023)

15. The mobile phone converts chemical energy stored in its batteries into .... energy and .... energy.
(Qalyubiyya 2023)

Question 05 Write the scientific term

1. A robot vehicle that can be controlled from a distance and is used to explore the surface of mars ( )
(Ismailia: Inspectorate2023)

2. The form of energy that is stored in battery of a remote-control toy cars. ( ) (Ministry models 2022)

3. The energy produced from playing guitar. ( ) Giza 2023)

4. Energy is neither created nor destroyed, but it changes from one form to another. ( ) (Dakahlia: 2023)

5. The energy used to play a drum. ( ) (Minia: Bani Mazar 2023)

6. A kind of energy that is produced from the electrical heater and burning coal . ( ) (Alex: montaza zone 2022)

7. A device used to convert electrical energy into light energy ( ) (Alex: East zone 2022)

8. The energy produced when the wood of trees is burned. ( ) (Alex: East zone 2022)

9. Energy that always produced due to friction. ( ) (Ministry models 2022)

10. The wasted energy of a computer . ( ) (Ministry models 2022)

11. The energy that is produced from the blender and helps it in doing its job. ( ) (Al-Azhar Al-Sharif 2023)

Question 06 Give reason for each of the following

1. Mars rover curiosity operates for long period of time on Mars without any need to be charged

....

Question 07 What happens if

1. On shaking a hand bell. (according to the change of energy)

....
(Cairo . Rod El Farag2023)

2. On turning an electric lamp. (according to changing in energy)

....

(Cairo: El Waily Zone2023)

3. The change of energy when you turn on the television

....

(Cairo: El Nozha2023)

4. You put your hands near a lighted lamp.

....

(Minia: Bani Mazar 2023)

5. Rubbing your hand together (According to the change of energy)

.... (Menoufia, 2022)

Question 08 Answer the following questions

1. **Complete the following energy chain in the hair dryer.** (Cairo: El Nozha2023)

.... from the Sun → Chemical energy (coal) → Thermal &kinetic energies → .... goes through wire → Thermal, sound & kinetic energies

2. **Complete the following table:** (Dakahlia: 2023)

Device	Input energy	Output energy
1. Electric heater:	....	....
2. Hand bell:	....	....

3. **Mention energy changing in the following table:** (El-Behira: Kafr El-Dawar 2023)

Device	Consumed (input) energy	Produced (output) energy
Fan:	....	....

4. **Complete the following figure:** (Menoufia 2023)

.... --Used in--> Electric lamp --produce--> .... energy / .... energy

5 **Mention the input and output energies of the opposite device.** (Minia: Bani Mazar 2023)

Input energy is ....

Output energy is ....

6 **Mention a device that convert electric energy into kinetic and sound energy**

(Qena 2023)

Question 01 choose the corret answer

CONCEPT 3.2

1. Among forms of fuel that present in car fuel stations are ....
   - a) gasoline and wood
   - b) natural gas and coal
   - c) wood and coal
   - d) natural gas and gasoline
2. All of the following are forms of fuel, except ....
   - a) natural gas
   - b) gasoline
   - c) coal
   - d) glass
3. .... is considered as the main resource of energy on the Eath's surface
   - a) Gasoline
   - b) the sun
   - c) natural gas
   - d) the moon
4. Wood is considered as ....
   - a) bio fuel
   - b) fossil fuel
   - c) liquid fuel
   - d) gaseous fuel
5. .... is a type of biofuel which is made of wood.
   - a) Coal
   - b) Oil
   - c) Charcoal
   - d) Natural gas
6. All the following are forms of fossil fuel, except ....
   - a) water
   - b) coal
   - c) natural gas
   - d) oil
7. Extreme heat and pressure under the earth's surface has an important role in forming ....
   - a) wood
   - b) wind
   - c) fossil fuel
   - d) biofuel
8. Fossil fuel is extracted from ....
   - a) the Earth's surface
   - b) the underground
   - c) the food
   - d) the water
9. Fossil fuels need .... to be formed under the Earth's surface.
   - a) five years
   - b) ten years
   - c) hundreds of years
   - d) millions of years

Question 02 put (true) or (false)

1. Both coal and wood produce thermal energy when they are burned. ( )
2. You need gasoline to move a bicycle ( )
3. When fuel is burned, it produces thermal energy. ( )
4. Green plants are one of the nonrenewable resources of energy. ( )
5. Water and gasoline are two renewable resource of energy ( )
6. We have to conserve all forms of fuel. ( )
7. Coal was formed from the sea animals remains. ( )
8. Charcoal is formed from decomposition of remains of ancient plants ( )
9. Biofuels are from nonrenewable resources of energy. ( )
10. The Sun is the main source of forming both biofuel and fossil fuel ( )
11. Oil and coal are considered as nonrenewable resources. ( )
12. Biofuel is one of non-renewable resources of energy. ( )
13. We can make liquid fuel from wood chips and grass ( )
14. Some types of plants can be used to make a liquid fuel. ( )

Question 04 Complete the following sentences

1. When fossil fuel is burned, it produces...................... energy.
2. Some forms of fuel can be used in cooking food such as wood and ....
3. Fuel is used as a source of .... energy.
4. .... is used as source of thermal energy in homes and cars.
5. We need .... energy for cooking food and warming houses.
6. Wood and .... are examples of biofuel, while .... and .... are examples of fossil fuel.
7. .... is a renewable source of energy.
8. Coal and oil are considered as .... resources of energy.
9. Corn and wood are .... fuel.
10. Fossil fuel is considered as .... resources of energy

Question 04 write scientific term for each of the following

1. Any substance that produces thermal energy when it is burned. ( )
2. The energy produced when the wood is burned ( )
3. It is the main source of most forms of energy on the Earth's surface ( )
4. They are fuels made from living organisms that can be planted ( )
5. It is a form of fossil fuel that was formed from dead marine animals ( )
6. It is a form of fossil fuel that was formed from dead plants under the effect of extreme heat and pressure ( )

Question 05 Give Reason for each of the following

1. Using wood of trees as a fuel has negative effects on the environment

....

2. Wood is considered as a fuel.

....

3. We must conserve the fossil fuels

....

Question 06 What happens if ?

1. The car movement if fuel runs out in a car.

....

2. The remains of marine were buried under the Erath's surface over millions of years

....

Question 07 cross the odd word

1. Wood - Coal - Oil - Natural gas.

Question 08 Answer the following questions

B) Give an example:

1.Renewable energy resource

2.Fossil fuel.

انتهت الأسئلة مع أطيب الامنيات بالنجاح والتوفيق

Answers









February Questions Bank



CONCEPT 3.1

Question 01 choose the corret answer

1. The energy source in a toy car is the ....
   - (a) engine
   - (b) tires
   - (c) battery
   - (d) fuel

   (suez 2023)

2. The idea of design and work of the robot that explores the surface of Mars depends on the idea of transforming ....
   - (a) electric to kinetic
   - (b) potential to kinetic
   - (c) light to electric
   - (d) kinetic to electric

   School book

3. In a battery of a toy car .... energy changes into electrical energy
   - (a) chemical
   - (b) sound
   - (c) thermal
   - (d) kinetic

   (Alex: montaza zone 2022)

4. Curiosity rover is designed to explore ....
   - (a) Mars planet
   - (b) the Moon
   - (c) the sun
   - (d) Earth planet

   (Alex.– Al Montaza zone(2)2023)

5. The .... on the rover curiosity convert solar energy into ...... energy which is used to change its batteries
   - (a) Solar panels – electrical
   - (b) Batteries – electrical
   - (c) Solar panels – sound
   - (d) Batteries – sound

   (alex. 2023)

6. The output energy in the Mars exploration vehicle is .... energy.
   - (a) electrical
   - (b) light
   - (c) kinetic
   - (d) solar

   (Menoufia 2023)

7. By rubbing hands .... energy is changed into thermal energy.
   - (a) chemical
   - (b) kinetic
   - (c) sound
   - (d) potential

   (Cairo . Rod El Farag2023)

8. A plugged-in lamp can turn .... energy to............. energy.
   - (a) electrical, light
   - (b) kinetic, light
   - (c) chemical, light
   - (d) chemical, heat

   (Ministry models 2022)



9. In the washing machine the .... energy is converted into kinetic and sound energy.
   - a) thermal
   - b) electrical
   - c) light
   - d) potential

(Giza: Dokki Zone2023)

10. When you use the hand bell, the .... energy changed into sound energy.
   - a) Electrical
   - b) potential
   - c) thermal
   - d) kinetic

(Ministry models 2022)

11. Energy produced from the electric bulb is .... energy.
   - a) chemical
   - b) sound
   - c) light
   - d) kinetic

(El-Behira: Kafr El-Dawar 2023)

12. The output energy when playing drums is the .... energy.
   - a) chemical
   - b) light
   - c) sound
   - d) potential

(Minia: Bani Mazar 2023)

13. The input energy when using the lamp is the .... energy.
   - a) electrical
   - b) potential
   - c) kinetic
   - d) thermal

(Minia: Bani Mazar 2023)

14. Energy doesn't destroy, nor create from nothing, this indicates ....
   - a) the draining of energy resources
   - b) conservation and transformation of energy
   - c) resources of energy are numerous
   - d) destroying the energy resources

School book

15. During riding a bike, some kinetic energy is converted into .... energy due to friction of bike's tire with the road.
   - a) chemical
   - b) potential
   - c) thermal
   - d) electrical

(Ministry models 2022)

16. The produced energy from radio that reflects its main function is .... energy
   - a) electric
   - b) sound
   - c) light
   - d) chemical

(Cairo: Heliopolis2023

17. Input energy when using the hair dryer is .... energy.
   - a) electrical
   - b) potential
   - c) light
   - d) kinetic

(Cairo: El Waily Zone2023)

18. The output energy when using the hair dryers is the .... energy.
   - a) electrical
   - b) potential
   - c) light
   - d) thermal




19. The output energy that is not from the job of hair dryer is ....
   - (a) chemical
   - (b) sound
   - (c) kinetic
   - (d) light

(Ismailia: Inspectorate2023)

20. The unusable energy that produced from the electric lamp .... energy
   - (a) potential
   - (b) chemical
   - (c) thermal
   - (d) light

(Cairo: El Nozha2023)

21. The wasted energy in most devices in the form of .... energy.
   - (a) electric
   - (b) thermal
   - (c) sound
   - (d) kinetic

(Menoufia 2023)

22. Both hair dryer and electric water kettle produce .... energy.
   - (a) thermal
   - (b) light
   - (c) electric
   - (d) potential

(Alex: montaza zone 2022)

23. The stored energy inside the battery of a mobile phone is................ energy
   - (a) electrical
   - (b) light
   - (c) chemical
   - (d) sound

(Alex: montaza zone 2023)

Question 02 put (true) or (false)

1. Mars is located a few meters away from Earth. ✗
(Alex: montaza zone 2022)
2. Mars Curiosity can be operated from a distance ✓
(Ministry models 2022)
3. A toy car can continue moving even after its battery runs out. ✗
(Giza: Dokki Zone2023)
4. Rover Curiosity is used to explore the Jupiter. ✗
(Alex. Al Montaza zone1)
5. Chemical energy is the energy that stored in food and battery. ✓
(Cairo . Rod El Farag2023)
6. Energy may be destroyed inside different devices. ✗
(Cairo: El Waily Zone2023)
7. Most of energy chains start with the moon ✗
(Giza: Agoza Zone2023)
8. There is a stored chemical energy inside the food we eat. ✓
(Giza: Agoza Zone2023)

9. Energy cannot be transformed from one form to another 
(Alex: montaza zone 2022)

10. Both electric bulb and electric heater produce thermal energy. 
(Alex: East zone 2022)

11. The energy chain of a burning candle is chemical energy converted into thermal energy & light energy 
(Giza 2022)

12. When pedalling a bike, the chemical energy in your body change to kinetic energy 
(Minia: Bani Mazar 2022)

13. Plants need sunlight to grow 
(Ministry models 2022)

14. The produced sound energy helps the hair dryer to do its function. 
(Ministry models 2022)

Question 03 Correct the underline words

1. Curiosity is a robotic vehicle that is designed to explore the surface of the moon. **Mars**
(Giza: Agoza Zone2023)

2. Thermal energy used to play a drum **The sun**
(Ministry models 2022)

3. To operate an electric mixer, we use sound energy **kinetic**
(Ministry models 2022)

4. Light energy is stored inside the battery of mobile phone. **electric**
(Qena: Science Inspectorate2023)



Question 04 Complete the following sentences

1. On Mars planet, Curiosity robot can be operated for a long period of time by using **solar** energy from sunlight that is converted into **electrical** energy used to recharge its batteries
(Cairo - Zeitoun Zone 2023)

2. Solar panels are used to generate **electrical** energy
(Ismailia: Inspectorate2023)

3. Most of the energy we use is produces inside the **sun**

(Ismailia: Inspectorate2022)

4. The energy that is produced from the battery and used to operate a toy car is **electrical** energy.

(Alex: East zone 2022)

5. Light energy is converted into **chemical** energy which is stored in the form of sugar inside the trees.

(Dakahlia: 2023)

6. **The sun** is the main source of energy on the Earth's surface.

(Dakahlia: 2023)

7. Energy can neither be **created** nor **destroyed**, but only **changed** from one form to another

(Cairo 2023)

8. To operate an electric mixer, we use **electrical** energy.

(Alex: East zone 2022)

9. The electric lamp converts **electrical** energy into light and heat energy.

(Alex: East zone 2022)

10. The energy can be **changed** from one form to another

(Cairo: El Waily Zone2023)

11. In hand bell, kinetic energy is converted into **sound** energy.

(Alexandria: Middle Zone2023)

12. In the washing machine electrical energy converted into **kinetic** energy.

(Suez: South Zone2023)

13. When you ride a bicycle, the **chemical** energy stored in your body is converted into **kinetic** energy which causes the bicycle to move

(Behaira 2022)

14. Energy produced from the radio which helps the device do its main function is **sound** energy

(El-Behira: Kafr El-Dawar 2023)

15. The mobile phone converts chemical energy stored in its batteries into **light** energy and **sound** energy.

(Qalyubiyya 2023)

Question 05 Write the scientific term

1. A robot vehicle that can be controlled from a distance and is used to explore the surface of mars — **mars rover / curiosity robot**

(Ismailia: Inspectorate2023)

2	The form of energy that is stored in battery of a remote-control toy cars.	Chemical energy (Ministry models 2022)
3	The energy produced from playing guitar.	Sound energy Giza 2023)
4	Energy is neither created nor destroyed, but it changes from one form to another.	Law of conservation of energy (Dakahlia: 2023)
5	The energy used to play a drum.	Kinetic energy (Minia: Bani Mazar 2023)
6	A kind of energy that is produced from the electrical heater and burning coal .	Thermal energy (Alex: montaza zone 2022)
7	A device used to convert electrical energy into light energy	Electric lamp (Alex: East zone 2022)
8	The energy produced when the wood of trees is burned.	Thermal energy (Alex: East zone 2022)
9	Energy that always produced due to friction.	thermal energy (Ministry models 2022)
10	The wasted energy of a computer .	Thermal energy (Ministry models 2022)
11	The energy that is produced from the blender and helps it in doing its job.	kinetic energy (Al-Azhar Al-Sharif 2023)

Question 06 Give reason for each of the following

1. Mars rover curiosity operates for long period of time on Mars without any need to be charged

   Because of solar panels that use sunlight to recharge its batteries

Question 07 What happens if

1. On shaking a hand bell. (according to the change of energy)

   Kinetic energy changes into sound energy

   (Cairo . Rod El Farag2023)

On turning an electric lamp. (according to changing in energy)

2. The electrical energy changes into light and thermal energies
(Cairo: El Waily Zone2023)

3. The change of energy when you turn on the television
Electrical energy changes into sound, light and thermal energies
(Cairo: El Nozha2023)

4. You put your hands near a lighted lamp.
You feel warm, because some electrical energy is converted into thermal energy
(Minia: Bani Mazar 2023)

5. Rubbing your hand together (According to the change of energy)
Kinetic energy changes into thermal energy
(Menoufia, 2022)

Question 08 Answer the following questions

1. **Complete the following energy chain in the hair dryer.** (Cairo: El Nozha2023)

light from the Sun → Chemical energy (coal) → Thermal &kinetic energies → Electrical energy goes through wire → Thermal, sound & kinetic energies

2. **Complete the following table:** (Dakahlia: 2023)

Device	Input energy	Output energy
1. Electric heater:	Electrical energy	Thermal energy
2. Hand bell:	Kinetic energy	Sound energy

3. **Mention energy changing in the following table:** (El-Behira: Kafr El-Dawar 2023)

Device	Consumed (input) energy	Produced (output) energy
Fan:	Electrical energy	Kinetic energy

4. **Complete the following figure:** (Menoufia 2023)

Electrical energy --Used in--> Electric lamp --produce--> light energy, thermal energy

5.

Mention the input and output energies of the opposite device. (Minia: Bani Mazar 2023)

Input energy is electrical energy

Output energy is thermal energy



6 **Mention a device that convert electric energy into kinetic and sound energy**

Washing machine – blender (Qena 2023)

Question 01 choose the corret answer

CONCEPT 3.2

1. Among forms of fuel that present in car fuel stations are ....
   a) gasoline and wood b) natural gas and coal c) wood and coal d) natural gas and gasoline
2. All of the following are forms of fuel, except ....
   a) natural gas b) gasoline c) coal d) glass
3. .... is considered as the main resource of energy on the Eath's surface
   a) Gasoline b) the sun c) natural gas d) the moon
4. Wood is considered as ....
   a) bio fuel b) fossil fuel c) liquid fuel d) gaseous fuel
5. .... is a type of biofuel which is made of wood.
   a) Coal b) Oil c) Charcoal d) Natural gas
6. All the following are forms of fossil fuel, except ....
   a) water b) coal c) natural gas d) oil
7. Extreme heat and pressure under the earth's surface has an important role in forming ....
   a) wood b) wind c) fossil fuel d) biofuel
8. Fossil fuel is extracted from ....
   a) the Earth's surface b) the underground c) the food d) the water
9. Fossil fuels need .... to be formed under the Earth's surface.
   a) five years b) ten years c) hundreds of years d) millions of years

Question 02 put (true) or (false)

1. Both coal and wood produce thermal energy when they are burned. ✔
2. You need gasoline to move a bicycle ✘
3. When fuel is burned, it produces thermal energy. ✔
4. Green plants are one of the nonrenewable resources of energy. ✘
5. Water and gasoline are two renewable resource of energy ✘
6. We have to conserve all forms of fuel. ✔
7. Coal was formed from the sea animals remains. ✘
8. Charcoal is formed from decomposition of remains of ancient plants ✘
9. Biofuels are from nonrenewable resources of energy. ✘
10. The Sun is the main source of forming both biofuel and fossil fuel ✔
11. Oil and coal are considered as nonrenewable resources. ✔
12. Biofuel is one of non-renewable resources of energy. ✘
13. We can make liquid fuel from wood chips and grass ✔
14. Some types of plants can be used to make a liquid fuel. ✔

Question 04 Complete the following sentences

1. When fossil fuel is burned, it produces thermal energy.
2. Some forms of fuel can be used in cooking food such as wood and coal
3. Fuel is used as a source of thermal energy.
4. natural gas is used as source of thermal energy in homes and cars.
5. We need thermal energy for cooking food and warming houses.
6. Wood and charcoal are examples of biofuel, while oil and coal are examples of fossil fuel.
7. water is a renewable source of energy.
8. Coal and oil are considered as nonrenewable resources of energy.
9. Corn and wood are bio fuel.
10. Fossil fuel is considered as nonrenewable resources of energy

Question 04 write scientific term for each of the following

1. Any substance that produces thermal energy when it is burned. — **Fuel**
2. The energy produced when the wood is burned — **Thermal energy**
3. It is the main source of most forms of energy on the Earth's surface — **sun**
4. They are fuels made from living organisms that can be planted — **Biofuel**
5. It is a form of fossil fuel that was formed from dead marine animals — **Oil**
6. It is a form of fossil fuel that was formed from dead plants under the effect of extreme heat and pressure — **Coal**

Question 05 Give Reason for each of the following

1. Using wood of trees as a fuel has negative effects on the environment
   Because continuity of cutting down trees leads to deforestation
2. Wood is considered as a fuel.
   Because wood produces thermal energy when it is burned
3. We must conserve the fossil fuels
   Because fossil fuels are formed over millions of years, so they cannot be replaced as we use them

Question 06 What happens if ?

1. The car movement if fuel runs out in a car.
   The car movement decreases until it stops
2. The remains of marine were buried under the Erath's surface over millions of years
   Formation of oil

Question 07 cross the odd word



Wood - Coal - Oil - Natural gas. Wood (biofuel)

Question 08 Answer the following questions

B) Give an example:

1.Renewable energy resource water

2.Fossil fuel. gasoline

انتهت الأسئلة مع أطيب الامنيات بالنجاح والتوفيق







February Revision

Mr. Ahmed Elbasha

(1) Write the scientific term:

1)	The source of energy in some toys that stores chemical energy.	(..............................)
2)	The energy produced from batteries.	(..............................)
3)	A robotic vehicle designed to explore the surface of Mars.	(..............................)
4)	The energy produced from a battery.	(..............................)
5)	The energy used to operate a television.	(..............................)
6)	The main source of energy for most forms of energies on Earth.	(..............................)
7)	The energy produced when the wood of trees is burned.	(..............................)
8)	The substance that is produced from the remains of dead trees that buried deep in the Earth over millions of years.	(..............................)
9)	The energy stored in coal.	(..............................)
10)	A form of energy produced from the electric lamp and affects our eyes.	(..............................)
11)	Energy can neither be created nor destroyed, but only converted from one form into another.	(..............................)
12)	The energy that is used to operate an electric heater.	(..............................)
13)	The energy that is stored in both batteries and food.	(..............................)
14)	The energy that is produced from the electric power stations and flows through wires.	(..............................)
15)	A form of energy that is produced from the electric heater and burning coal.	(..............................)
16)	The wasted energy when using a mobile phone for a long time.	(..............................)

17)	The energy produced when the wood of trees is burned.	(..................................)
18)	It is any substance which produces thermal energy on burning.	(..................................)
19)	Natural resources of energy, that take a short period of time to be renewed.	(..................................)
20)	Natural resources of energy that take a very long period of time to be formed.	(..................................)
21)	It is a form of biofuel that can be made from some types of plants such as grass and wood chips.	(..................................)
22)	They are fuels that were formed from remains of dead animals and plants under the Earth's surface.	(..................................)
23)	It is a form of fossil fuel that was formed from remains of dead plants under the effect of extreme heat and pressure.	(..................................)
24)	It is a form of fossil fuel that was formed from dead marine animals	(..................................)

✹(2) Complete the following sentences by using these words:

1. **(kinetic - chemical – electrical - thermal)**

1. The energy stored in batteries is .... energy.
2. Fuel is used as a source of .... energy.
3. batteries of a remote-controlled toy, chemical energy is converted into .... energy, which is converted into .... energy or sound energy.

2. **(heat - chemical - coal - kinetic - Sun - thermal)**

1. Most of the energy we use is produced inside the ....
2. When you eat, your body turns the .... energy found in the food into .... energy that helps your body move.
3. In electric power stations .... is burned to generate thermal energy.
4. In an electric iron, electrical energy is converted into .... energy.
5. In several electrical devices, most of the waste energy leaks out in the form of ....

✹(3) Choose the right answer:

1. **The .... on the rover Curiosity convert solar energy into .... energy which is used to charge its batteries. ***

a. solar panels - electrical b. batteries - electrical
c. solar panels - sound d. batteries - sound

2. **In the battery of a toy car .... energy is converted into electrical energy.**

a. chemical b. sound c. light d. thermal

3. **Electrical energy produced from a toy car battery can be converted into .... and .... energies.**

a. kinetic - sound - solar b. kinetic - thermal - solar
c. kinetic - sound – thermal d. sound - thermal - solar

4. **The energy source in a toy car is the ....**

a. engine. b. tires. c. battery. d. fuel.

5. **It takes several .... for a spacecraft to travel from Earth to Mars.**

a. seconds b. minutes c. days d. months

6. **Curiosity rover is designed to explore ....**

a. Earth. b. Mars. c. the Sun. d. the moon.

7. **In the washing machine, the .... energy is converted into kinetic and sound energies.**

a. light b. electrical c. thermal d. potential

8. **You feel warm when you rub your hands together, because .... energy is converted into thermal energy.**

a. kinetic b. light c. electrical d. sound

9. **3. Inside a light bulb, electrical energy is converted into .... and .... energies.**

a. sound - light b. sound - thermal
c. kinetic - light d. light - thermal

10. **When you turn on a light bulb, the electrical energy travels through .... until reaching the bulb.**

a. wires b. glass c. wood d. plastic

11. **Remains of living organisms that were buried under the Earth's surface are affected by .... to form fossil fuels.**

a. low pressure and high temperature b. high pressure and low temperature
c. low pressure and low temperature d. high pressure and high temperature

12. All the following factors play an important role in the formation of fossil fuels, except ....

a. extreme pressure. b. extreme heat.
c. strong wind. d. rocks and sediment.

13. All forms of fossil fuel are formed ....

a. above the Earth's surface. b. under the Earth's surface.
c. above the water surface. d. in the air around us.

14. All the following are forms of fossil fuels, except ....

a. water. b. coal. c. natural gas. d. oil.

15. The steps of forming fossil fuel don't include .... of the remains of living organisms.

a. decaying b. cooling c. burying d. heating

16. All the following actions don't conserve electrical energy, except ....

a. unplugging unused electrical appliances.
b. plugging many unused electrical appliances.
c. turning on all the house lights all the day long.
d. leaving the television turned on all the day long.

17. All the following can be used to generate electrical energy, except ....

a. oil. b. natural gas. c. water. d. glass.

18. In the hair dryer, the electrical energy is converted into ...., ... and .... energies.

a. sound - thermal - kinetic b. kinetic - light - chemical
c. thermal - light – chemical d. light - sound - chemical

19. Plants can convert the light energy from the Sun into .... energy which is stored in the plant in the form of sugar.

a. sound b. electrical
c. chemical d. kinetic

20. When you eat an apple, your body converts the .... energy stored in the apple into .... energy when you move.

a. chemical - electrical b. kinetic - chemical
c. electrical – chemical d. chemical - kinetic

21. Electric wires are made of ....

a. copper. b. paper.
c. wood. d. glass.

22. In the electric water kettle, electrical energy is converted into .... energy that can heat the cold water inside it.

a. potential b. thermal c. electrical d. chemical

23. While playing a guitar............... energy is converted into sound energy.

a. kinetic b. light c. chemical d. potential

24. Both the hair dryer and the electric water kettle produce .... energy.

a. chemical b. thermal c. electrical d. potential

25. Some kinetic energy is converted into .... energy due to friction of bike's tire with the road.

a. light b. electrical c. potential d. thermal

26. Which form of energy is not used or produced when you turn on an electric bulb?

a. Electrical. b. Light. c. Thermal. d. Sound.

27. When you use the hand bell, the .... energy is converted into sound energy.

a. light b. thermal c. kinetic d. electric

28. The input energy when using the hair dryer is the .... energy.

a. electrical b. potential c. kinetic d. thermal

29. Which form of energy is not an output energy when a hair dryer is used ? ....

a. Kinetic energy. b. Electrical energy.

c. Thermal energy. d. Sound energy.

30. During charging a mobile phone, the .... energy is converted into .... energy that is stored in the phone battery.

a. electrical - chemical b. chemical - thermal

c. electrical – thermal d. thermal - chemical

31. Sound and .... energies are output energies when operating the mobile phone.

a. electrical b. potential c. chemical d. light

32. The output energy when playing drums is the .... energy.

a. chemical b. light c. sound d. potential

33. The produced .... energy does not help the blender do its job.

a. chemical b. sound c. light d. potential

34. When a piece of coal is burned .... energy is produced.

a. thermal b. solar c. sound d. potential

35. When a football player runs, the chemical energy inside his body is converted into .... and .... energies.

a. potential - light
b. kinetic - light
c. thermal - kinetic
d. thermal – light

36. Among the forms of fuel that are present in car fuel stations are ....

a. gasoline and wood.
b. natural gas and coal.
c. wood and coal.
d. gasoline and natural gas.

37. We can use the energy obtained from burning of wood directly for all of the following purposes, except ....

a. warming houses.
b. operating television.
c. cooking food.
d. boiling water.

38. .... is considered as the main resource of energy on the Earth's surface.

a. Gasoline
b. The Sun
c. Natural gas
d. The moon

39. All the following are renewable resources of energy, except...............

a. natural gas.
b. water.
c. the Sun.
d. wind.

40. Nonrenewable resources of energy take .... to be formed.

a. a short period of time
b. a very long period of time
c. few minutes
d. few hours

41. Ancient people used .... as a fuel before discovering gasoline.

a. electricity
b. water
c. wind
d. wood

42. Wood is considered as ....

a. biofuel.
b. fossil fuel.
c. liquid fuel.
d. gaseous fuel.

43. Coal was formed under the Earth's surface from the remains of ....

a. dead animals.
b. dead plants.
c. dead humans.
d. dead insects.

44. Extreme heat and pressure under the Earth's surface has an important role in forming ....

a. wood.
b. wind.
c. fossil fuel.
d. biofuel

✹(4) Complete the following:

1. Remote controlled toy car converts .... energy stored in its batteries into .... energy that is converted into .... energy which is used to move the car.
2. To operate an electric mixer we use .... energy.
3. When your cell phone is out of charge, you must recharge its .... to operate it again.
4. Some calculators can change solar energy into .... energy by using the sunlight.
5. On planet Mars, Curiosity robot is operated by using .... energy from sunlight that is converted into .... energy used to recharge its batteries.
6. The energy produced from the battery and used to operate a toy car is .... energy.
7. The energies that are produced from the washing machine are .... energy and .... energy.
8. When you rub your hands together, the .... energy is converted into .... energy.
9. When you ride a bicycle .... energy stored in your food is converted into .... energy which causes the bicycle to move.
10. Some kinetic energy of the bicycle is converted into .... energy due to the friction of its tires with the road.
11. The electric lamp converts .... energy into light energy and .... energy.
12. Energy can neither be .... nor .... but only .... from one form to another.
13. The electric lamp converts electrical energy into .... energy and .... energy.
14. By using the mobile phone for a long time, some energy is lost in the form of .... energy.
15. The main function of a blender is done by the help of the produced .... energy.
16. The input energy in an electric bulb is .... energy, while its output energies are .... energy and also .... energy which doesn't help in its main function
17. In the electric heater .... energy is considered as an input energy, while thermal energy is considered as .... energy.

18. The kinetic energy in a hand bell is considered as .... energy, while in an electric fan is considered as .... energy.

19. The natural resources that can be replaced shortly after being used are called .... resources of energy.

20. The natural resources that are consumed at a rate faster than they can be renewed are called .... resources of energy.

21. Different forms of fuel can be classified into two main types which are .... and ....

22. The type of fuel that is produced from living organisms that can be planted is called .... such as wood and ....

23. Wood and .... are examples of biofuel, while .... and .... are examples of fossil fuel.

24. In electric power station, we use fossil fuels such as oil and natural gas which are considered as .... resources of energy.

25. Water is considered as .... resource of energy, and we can use it to generate ....

26. When fuel is burned in an electric power station, it produces .... energy to heat water.

(5) Put (√) or (X) :

1. We can convert the solar energy into different forms of energy. ( )
2. The input energy in the hair dryer is chemical energy. ( )
3. Mobile phone stores electrical energy in its battery in the form of chemical energy. ( )
4. A toy car can continue moving even after its battery runs out. ( )
5. As the speed of a car increases, the amount of used fuel decreases. ( )
6. Biofuel is one of nonrenewable resources of energy. ( )
7. Extreme cooling under the Earth's surface helps in the formation of oil. ( )
8. Both coal and wood produce energy when they are burned. ( )
9. Any form of fossil fuels must be formed under the Earth's surface. ( )
10. Oil, natural gas and coal can be used to produce electrical energy. ( )
11. Turning off lights that we do not need is a way to conserve electricity. ( )
12. Movement of a generator in an electric power station produces potential energy. ( )
13. We have to conserve all forms of fuel. ( )
14. The consumed energy in the blender is sound energy. ( )
15. The produced energy in remote-controlled toy car is chemical energy. ( )
16. In the electric blender, sound energy is converted into electrical energy ( )
17. Most of energy chains starts with the energy of the moon. ( )
18. Energy can be destroyed inside some devices . ( )
19. When you ride a bike, some of the kinetic energy is converted into thermal energy due to the friction between tires and the road. ( )
20. There is a stored chemical energy inside the food we eat. ( )
21. Energy can't be changed from one form to another. ( )
22. The electric bulb depends on chemical energy to operate. ( )
23. Both the electric bulb and the electric heater produce thermal energy ( )
24. Water and gasoline are two renewable resources of energy. ( )
25. We have to reduce the usage of the Sun as a source of energy. ( )
26. Rate of usage of oil is slower than its rate of formation under the Earth's surface. ( )
27. The Sun is the main source of forming both biofuel and fossil fuel. ( )
28. The input energy in a hair dryer is the chemical energy . ( )
29. In waterfalls, the water that falls down has kinetic energy. ( )
30. Curiosity is a vehicle that travels across the surface of the planet Mars. ( )
31. In the soap dispenser, potential energy is converted into kinetic energy. ( )

✹(6) Correct the underline

1	The solar energy produced from the **moon** can be converted into different forms of energy.	(……………………….)
2	Toy cars depend on **fuel** as a source of electrical energy.	(……………………….)
3	Curiosity is a robotic vehicle that is designed to explore the surface of **moon**.	(……………………….)
4	Most of energy chains start with the **moon**	(……………………….)
5	There is a stored **thermal** energy inside the food we eat.	(……………………….)
6	The input energy in a hair dryer is the **chemical** energy	(……………………….)
7	We need **sound** energy, for cooking food and warming houses.	(……………………….)
8	**Coal** is the main source of most energies on the Earth's surface.	(……………………….)
9	Fuel is the substance that produces **electrical energy** on burning.	(……………………….)
10	We have to increase planting vegetables and fruits that need a **large** amount of water.	(……………………….)
11	The nonrenewable resources of energy take a **short** period of time to be formed under the Earth's surface.	(……………………….)
12	The rate of usage of fossil fuels must be **increased**.	(……………………….)
13	Wood is a form of **fossil fuels** that can be used in houses.	(……………………….)
14	Fossil fuels include oil, coal and **wood**.	(……………………….)
15	After death of living organisms, their remains are buried under the Earth's surface and exposed to extreme pressure and **cool**.	(……………………….)
16	Water is a **nonrenewable** energy resource.	(……………………….)
17	The movement of generator in the electric power station changes kinetic energy into **potential** energy.	(……………………….)

✸(7) Give reason for:

1. A remote-controlled toy car needs a battery to move from one place to another.

   ....

2. Some calculators use sunlight to operate.

   ....

3. Mars rover Curiosity operates for a long period of time on Mars without any need to be recharged.

   ....

4. Water and wind are considered as renewable resources of energy.

   ....

5. Coal and gasoline are considered as nonrenewable resources of energy.

   ....

6. Using wood of trees as a fuel has negative effects on the environment.

   ....

7. When you rub your hands together, you feel warm.

   ....

8. You feel heat, when you put your hands near a lighted electric lamp.

   ....

9. Thermal energy in a mobile phone is considered as a wasted energy.

   ....

10. We must turn off lights that we do not need.

    ....

✸(8) What happen if:

1. Batteries of remote-controlled toy car run out.

   ....

2. Solar calculators were exposed to the sunlight.

   ....

3. Mars rover Curiosity didn't get any sunlight on Mars surface.

   ....

4. You put your hands near the lighted lamp.

   ....

5. You use a mobile phone for a long time. (according to the wasted energy).

   ....

6. You turn on an electric fan. (according to the change of energy).

   ....

7. Decomposition of remains of sea animals under the Earth's surface

   ....

(9) TRY TO ANSWER:

1. Look at the following figures, then complete the following sentences :



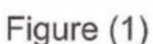
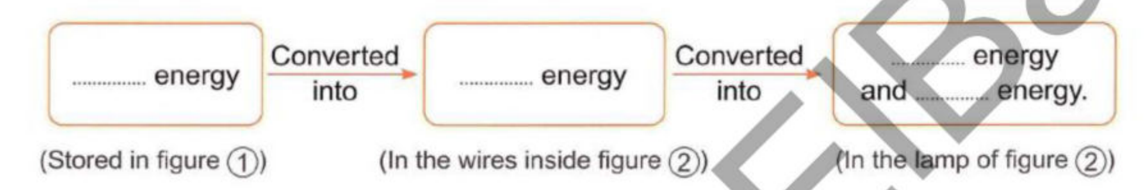


Figure (1)



Figure (2)

1. Figure (1) stores .... energy.
2. Figure (2) needs a source that produces .... energy to be operated.
3. The energy chain that is produced due to inserting figure (1) inside figure (2) and turning it on is :



2. Choose from column (A) what suits it in both columns (B) and (C) :

(A) Energy used	(B) The item	(C) Energy produced
1. Kinetic energy	a.	A. Thermal energy.
2. Electrical energy	b.	B. Chemical energy.
3. Solar energy	c.	C. Sound energy.

1. .... → ....   2. .... → ....   3. .... → ....

3. <u>Look at the opposite picture, then choose the correct answer:</u>


Burning coal

1. **Coal is burned to produce ....**

   a. thermal energy. b. sound energy.

   c. natural gas. d. wood of trees.

2. **Coal and .... are used in warming houses.**

   a. water b. plastic

   c. sand d. wood

4. <u>Look at the opposite picture, then choose the correct answer according to your studying of how electric power stations work :</u>

1. **To generate electricity inside electric power station, we need to .... the fuel.**

   a. cool b. mix water with

   c. burn d. mix sand with

2. **Steam in electric power station is produced as a result of ....**

   a. heating water. b. mixing water with fuel.

   c. cooling water. d. cooling fuel.

3. **On generating electricity inside electric power stations, ... is the first type of energy which is produced from burning of fuel.**

   a. electrical energy b. thermal energy

   c. potential energy d. kinetic energy



Model Answer

(1) Write the scientific term:

1. Battery
2. Electric energy
3. Mars rover curiosity
4. Electrical energy
5. Electrical energy
6. Sun
7. Thermal energy
8. Coal
9. Chemical energy
10. Light energy
11. Law of conservation of energy
12. electric energy
13. chemical energy
14. electrical energy
15. thermal energy
16. thermal energy
17. thermal energy
18. fuel
19. renewable energy
20. non-renewable energy
21. liquid fuel
22. fossil fuel
23. coal
24. oil

(2) Complete the following sentences by using these words:

1.

1. chemical
2. thermal
3. electrical – kinetic

2.

1. Sun
2. Chemical – kinetic
3. Coal
4. Thermal
5. heat

(3) Choose the right answer:

1. A
2. A
3. C
4. C
5. D
6. B
7. B
8. A
9. D
10. A
11. D
12. C
13. B
14. A
15. B
16. A
17. D
18. A
19. C
20. D
21. A
22. B
23. A
24. B
25. D
26. D
27. C
28. A
29. B
30. A
31. D
32. C
33. B
34. A
35. C
36. D
37. B
38. B
39. A
40. B
41. D
42. A
43. B
44. C

(4) Complete the following:

1. Chemical – electrical – kinetic
2. Electrical
3. Battery
4. Electrical
5. Solar – electrical
6. Electrical
7. Kinetic – sound
8. Kinetic – thermal
9. Chemical – kinetic
10. Thermal
11. Electrical – thermal
12. Created – destroyed – converted
13. Light – thermal
14. Thermal
15. Kinetic
16. Electrical – light – thermal
17. Electrical – output
18. Input – output
19. Renewable
20. Non-renewable
21. Biofuel – fossil fuel
22. Biofuel – charcoal
23. Charcoal – oil – coal
24. Nonrenewable
25. Renewable – electricity
26. Thermal

(5) Put (√) or (X)

1. (√)
2. (X)
3. (√)
4. (X)
5. (X)
6. (X)
7. (X)
8. (√)
9. (√)
10. (√)
11. (√)
12. (X)
13. (√)
14. (X)
15. (X)
16. (X)
17. (X)
18. (X)
19. (√)
20. (√)
21. (X)
22. (X)
23. (√)
24. (X)
25. (X)
26. (√)
27. (√)
28. (X)
29. (√)
30. (√)
31. (√)

(6) Correct the underline

1. Sun
2. Battery
3. Sun
4. Sun
5. Chemical
6. Electrical
7. Thermal
8. Sun
9. Thermal
10. Small
11. Long
12. Decrease
13. Biofuel
14. Natural gas
15. Heat
16. renewable
17. electrical

(7) Give reason for:

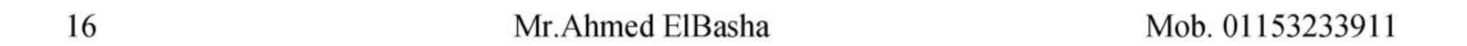
1. Because the chemical energy stored in battery is converted into electrical energy that changes into kinetic energy that makes the car moves.
2. Because the energy of sunlight (solar energy) is converted into electrical energy which calculators use it to be operated.
3. Due to the presence of solar panels that use sunlight to recharge its batteries.
4. Because they can be replaced shortly after being used.
5. Because they are used at a rate faster tha.n they can be renewed.
6. Because when wood is burned, it release gases that cause air pollution.
7. Because the kinetic energy is converted into thermal energy.
8. Because some of the electrical energy is converted into thermal energy.
9. Because it doesn't help the mobile phone to do its main function.
10. To conserve the electricity.

✹(8) What happen if:

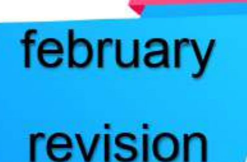
1. The car will not move.
2. Solar energy is converted into electrical energy that operate them.
3. It cannot be operated
4. You feel warm.
5. Some energy is wasted as thermal energy.
6. The electrical energy is converted into kinetic energy.
7. They will form oil and natural gas.

✹(9) TRY TO ANSWER:

1.	2.
1. Chemical 2. Electrical 3. Chemical – electrical – light and thermal	1. **B – c** 2. **C – a** 3. **A - b**
3. 1. **A** 2. **D**	**4.** 1. **C** 2. **A** 3. **B**









Q1: Choose the correct answer:

1. The energy source in toy car is a………

a. engine . b. tiers . c. Battery . d. fuel .

2-curiosity rover is designed to explore

a. Earth . b. sun . c. Mars. d. Moon

3. Plant can convert the light energy from the sun into …… which stored in the plant in the form of sugar

a. sound . b. chemical

c. electrical d. Kinetic

4. In washing machine the ……. Energy change into kinetic and sound

a. Light. b. Thermal.

c. electrical d. Kinetic

5- Both the hair drayer and the electric water kettle produce ….

a. chemical energy b. thermal energy

c. potential energy d. light energy

6- on playing violin ……energy is convertd into sound energy

a. chemical energy b. thermal energy

c. potential energy d. kinetic energy

7. when a paper is burnt ……………energy is produced

a. chemical energy b. thermal energy

c. potential energy d. kinetic energy





8. Which form of energy is not an out put energy in hair dryer?

a. electrical energy b. thermal energy

c. sound energy d. kinetic energy

9.In hand bell …………… energy is converted to …..energy

a. Potential - sound.

b. Light - chemical .

c. sound - electrical

d. kinetic – sound

10- We can use energy obtained from burning of wood directly for all the following except

a. Warming houses .

c. cooking food .

b. operating television .

d. boiling water .

11. All of the following are renewable resources of energy except …………..

a. Coal . b. Water .

c. Sun . d. Wind.

12. Extreme heat and pressure under earth surface has an important role in formation of ………………….

a. wood b. wind c. fossil fuel d. rocks

Q2-Complete the following sentences: -

1- Some calculators can change solar energy into……..energy by using the sunlight.

2- The energy can be...........from one form to another.







3- **When you press on the soap dispenser,....... energy stored in its spring is converted into…….energy that moves the soap upward.**

energy

4- **In any energy chain, some of the energy is wasted in the form of……………………**

5- **When you ride a bicycle,.......energy stored in your body is converted into……. energy which causes the bicycle to move.**

6- **Energy can neither be…….nor……but only…………….**

from one form to another.

7- **The wasted energies that are produced from a vacuum cleaner are……. ….energy and .... energy.**

8- **The main function of a blender is done by the help of the produced…………….energy.**

9- **The kinetic energy in a hand bell is considered as………………energy, while in an electric fan is considered as**

…………….energy

10- **We can use some forms of fuel in warming houses such as……………… and……..**

11- **Coal,..................and………..can be used in electric power stations to generate electricity.**

12- **The natural resources that are consumed at a rate faster than they can be renewed are called.......... ...... resources of energy.**

13- **Different forms of fuel can be classified into two main types which are and……….**







Q3-Write the scientific term of each of the following:

1- The energy produced from batteries. ( )

2- The source of energy in some toys that stores chemical energy. ( )

3- The energy stored in the battery ( )

4- The energy used to operate a television. ( )

5- Energy can neither be created nor destroyed, but only converted from one form to another. ( )

6- The energy produced from playing guitar.( )

7- Thermal energy in a mobile phone is considered as a wasted energy. ( )

8- The nonrenewable resources of energy take a short period of time to be formed under the Earth's surface. ( )

9- Natural resources of energy that take a very long period of time to be formed. ( )

Q4 : Give reasons for :

1- Some calculators use the sunlight to operate.

……………………………………………………………………………..

2- Mars rover Curiosity operates for a long period of time on Mars without any need to be recharged.

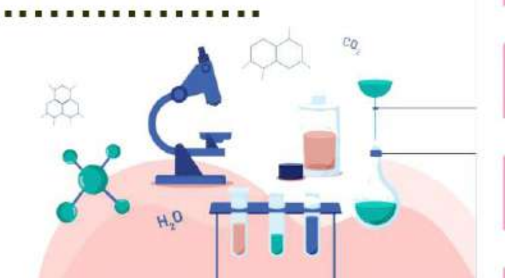
……………………………………………………………………………..

3- There is an energy change when you press the spring of a soap dispenser.

……………………………………………………………………………

4- Not all the energy that enters the energy chain completely reaches the device.

……………………………………………………………………





5- The presence of batteries inside a toy car.

……………………………………………………………………

6- You feel heat, when you put your hands near a lighted electric lamp.

……………………………………………………………………

7- Sound energy and thermal energy are considered as wasted energy in the blender.

……………………………………………………………………

8- The fuel is very important for different means of transportation.

……………………………………………………………………

9 - Sometimes the fuel indicator of a car goes down.

……………………………………………………………………

10-Coal and gasoline are considered as nonrenewable resources of energy.

……………………………………………………………………

11- Water and wind are considered as renewable resources of energy.

……………………………………………………………………

12- . Using wood of trees as a fuel has negative effects on the environment.

……………………………………………………………………

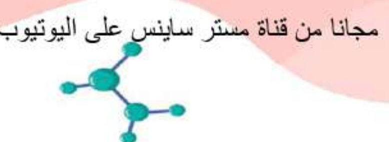
Q5 Put (√) or (X):

1- In the electric blender, sound energy is converted into electrical energy and kinetic energy. ( )

2-Some of the converted energy does not help some devices do the function

for which it was designed.

3-The energy chain of a burning wood is: energy into 6. In waterfalls, the water that falls down has kinetic energy



4- The produced sound energy helps the hair dryer to do its function.

5- Both coal and wood produce energy when they are burned.

Q6 What happens to ...?

1- Solar calculators were exposed to the sunlight.

……………………………………………………………

2- Batteries of remote-controlled toy car run out.

……………………………………………………………

3- The change of energy when you burn a piece of wood.

……………………………………………………………

4- The change of energy when you turn on the television.

……………………………………………………………

5- if you put your hands near the lighted lamp.

……………………………………………………………

6-A form of energy that is produced from the electric heater and Brüning Coal.

……………………………………………………………

7- The energy that is produced from the electric power stations and flows through wires.

……………………………………………………………

8- You turn on an electric fan.(accordina to the change of energy).

……………………………………………………………

9- The car movement if fuel runs out in a car.

……………………………………………………………

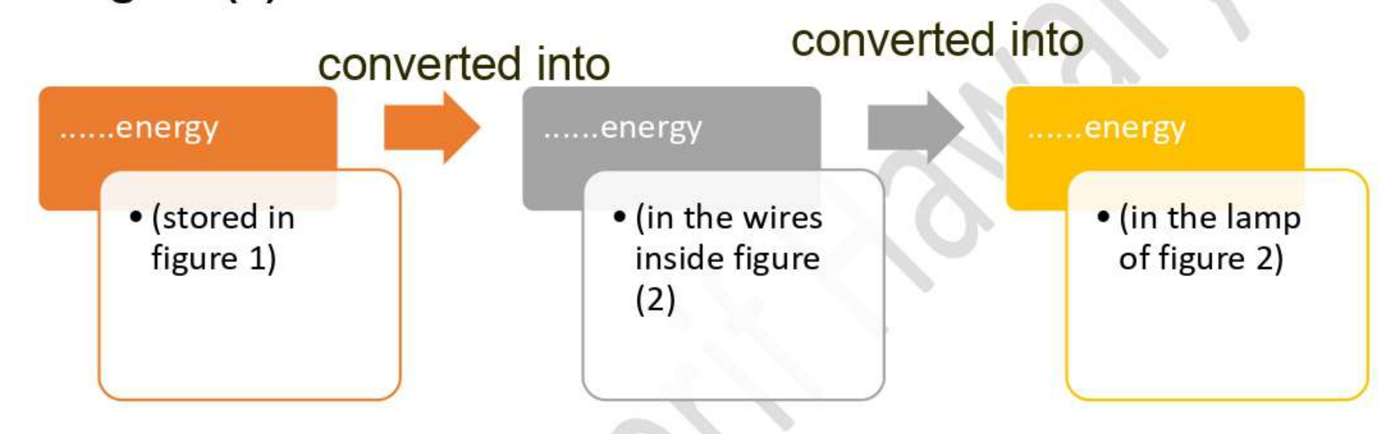
10- The remains of dead living organisms were buried under the Earth's surface over millions of years.

……………………………………………………………

Q7 Look at the following figures, then complete the following sentences:


Figure (1) Figure (2)

1. Figure (1) converts……..energy into…….energy.
2. Figure (2) converts……energy into…….energy.
3. The energy chain that is produced due to inserting figure (1) inside figure (2)



Q8 Look at the opposite picture, then choose the correct answer:

1. Coal is a form of fuel, which is used in all the following purposes, except

a. cooking food. b. operating cars.
c. generating electricity. d. warming houses.


Burning coal

2. Coal is burned to produce

a. thermal energy. b. sound energy.
c. natural gas. d. wood of trees.

3. Coal and……………….are used in warming houses.

a. water b. plastic c. sand d. wood







february revision



Q1: Choose the correct answer:

1. The energy source in toy car is a………

a. engine . b. tiers . c. Battery . d. fuel .

2-curiosity rover is designed to explore

a. Earth . b. sun . c. Mars. d. Moon

3. **Plant can convert the light energy from the sun into …… which stored in the plant in the form of sugar**

a. sound . b. chemical

c. electrical d. Kinetic

4. **In washing machine the ……. Energy change into kinetic and sound**

a. Light. b. Thermal.

c. electrical d. Kinetic

5- **Both the hair drayer and the electric water kettle produce ….**

a. chemical energy b. thermal energy

c. potential energy d. light energy

6- **on playing violin ……energy is convertd into sound energy**

a. chemical energy b. thermal energy

c. potential energy d. kinetic energy

7. **when a paper is burnt ……………energy is produced**

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a. Potential - sound.

b. Light - chemical .

c. sound - electrical

d. kinetic – sound

10- We can use energy obtained from burning of wood directly for all the following except

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c. cooking food .

b. operating television .

d. boiling water .

11. All of the following are renewable resources of energy except …………..

a. Coal . b. Water .

c. Sun . d. Wind.

12. Extreme heat and pressure under earth surface has an important role in formation of ………………….

a. wood b. wind c. fossil fuel d. rocks

Q2-Complete the following sentences: -

1- electric

2- change.



3- potential - kinetic
4- heat energy
5- chemical to kinetic
6- created nor destroyed – change
7- heat - sound
8- kinetic.
9- input – output
10- Coal - wood
11- natural gas
12- nonrenewable
13- fossil fuel – biofuel

Q3-Write the scientific term of each of the following:

1- electric energy
2- batteries
3- chemical energy
4- electric energy
5- conservation law of energy
6- sound energy
7- Thermal energy
8- biofuel
9- fossils fuel

Q4 : Give reasons for :

1- Bec. Solar cells use the energy of sun light into electric energy.
2- Bec. Solar panel used to change solar energy into electric energy which used to charge the rover batteries

3- Bec. Potential energy change into kinetic energy

4- Bec. A part of this energy lost as wasted energy as heat energy

5- Bec. Battery is a source of electricity

6- Bec .electric lamp produce thermal energy as a wasted energy

7- Bec. Both of them are not from the useful energy of hair dryer or blinder .

8- bec. When it burns chemical energy change into heat and kinetic energies to move the cars

9 – As it consumes during the motion of car .

10- bec. They are used faster than they can be replaced

11- bec. It can be replaced soon after it is used

12-bec. When it burns it causes air pollution

Q5 Put (√) or (X):

1- In the electric blender, sound energy is converted into electrical energy and kinetic energy. (x)

2-Some of the converted energy does not help some devices do the function for which it was designed. √

3-The energy chain of a burning wood is light energy x

4- In waterfalls, the water that falls down has kinetic energy √

5- The produced sound energy helps the hair dryer to do its function. x

6- Both coal and wood produce energy when they are burned. √

Q6 What happens to ...?

1- it will turn on

2- no electric energy produced

3- it produces thermal energy .



4- electric to sound and light

5- feel hotness of lamp

6-thermal energy produced

7- electric energy produced

8- electric energy change to kinetic .

9- the car stop moving

10- fossil fuel is formed .

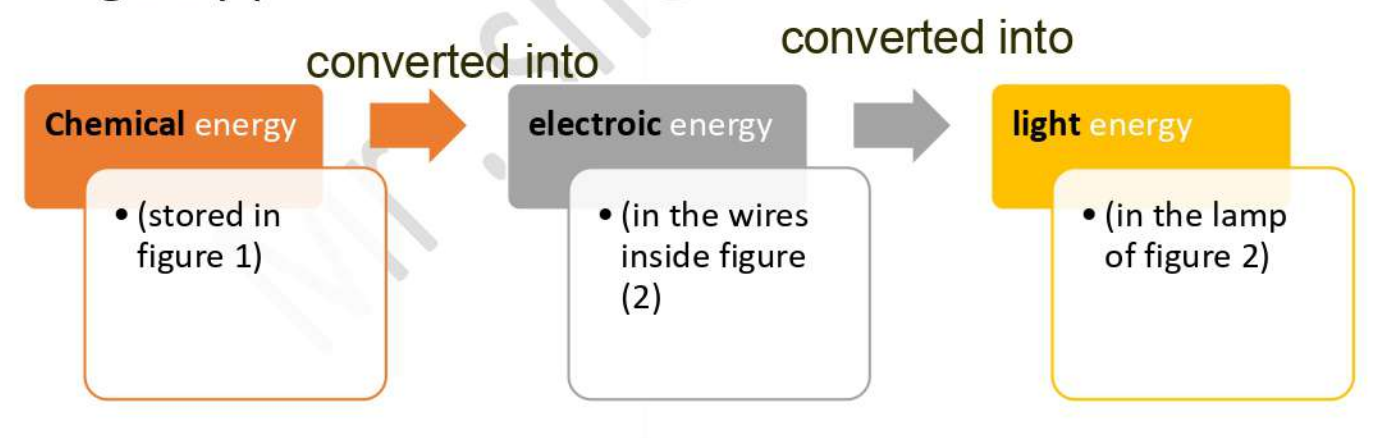
Q7 Look at the following figures, then complete the following sentences:



Figure (1)


Figure (2)

1. Figure (1) converts Chemical ..energy into electric energy.
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3. The energy chain that is produced due to inserting figure (1) inside figure (2)



Q8 Look at the opposite picture, then choose the correct answer:

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a. cooking food. b. operating cars.
c. generating electricity. d. warming houses.




Burning coal

2. Coal is burned to produce
a. thermal energy. b. sound energy.
c. natural gas. d. wood of trees.

3. Coal and……………….are used in warming houses.
a. water b. plastic c. sand d. wood





Primary 4

Question 1

Choose the correct answer:

1.	In the battery of toy car ……energy converted into electric energy a. chemical b. sound c. light d. thermal
2.	It takes several …….for a spacecraft to travel from Earth to Mars. a. seconds b. minutes c. days d. months
3.	Curiosity rover is designed to explore …………… a. Earth. b. Mars. c. the Sun. d. the moon.
4.	Electrical energy produced from a toy car battery can be converted into …………,………………. and………..energies. a. mechanical / sound / solar b. mechanical / thermal /solar c. mechanical / sound / light d. sound / thermal/ solar
5.	The energy source in a toy car is the ………. a. engine. b. tires. c. battery. d. fuel.
6.	If the …… energy doesn't go through the electric fan's wire, it will not turn on. a. sound b. electrical c. kinetic d. thermal
7.	When you use the hand bell, the ……... energy is converted into sound energy. a. light b. thermal c. kinetic d. electric
8.	When you eat an apple, your body converts ……….. energy stored in the apple into ………….. energy when you move. a. chemical — electrical b. kinetic — chemical c. electrical — chemical d. chemical — kinetic
9.	You feel warm when you rub your hands together, because ……………energy is converted into thermal energy. a. kinetic b. light c. electrical d. sound

10. Plants can convert the light energy from the Sun into …………. energy which is stored in the plant in the form of sugar.
a. sound b. electrical c. chemical d. kinetic

11. In the washing machine, the ………… energy is converted into kinetic and sound energies.
a. light b. electrical c. thermal d. potential

12. In the hair dryer, the electrical energy is converted into ……….and .... energies.
a. sound — thermal — kinetic b. kinetic — light — chemical
c. thermal — light — chemical d. light — sound — electrical

13. All the following are renewable resources of energy, except….
a. natural gas. b. water. c. the Sun. d. wind.

14. The produced …………energy does not help the blender do its job.
a. chemical b. sound c. light d. potential.

15. Sound and…………energies are output energies when operating the mobile phone.
a. electrical b. potential c. chemical d. light

16. When a piece of coal is burned,………. energy is produced.
a. thermal b. solar c. sound d. potential

17. Nonrenewable resources of energy take ……….to be formed.
a. short period of time b. a very long period of time
c. few minutes d. few hours

18. Inside a light bulb, electrical energy is converted into ……………and ………….. energies
a. sound — light b. sound — thermal
c. kinetic — light d. light — thermal

19. Coal was formed under the Earth's surface from the remains of …………
a. dead animals. b. dead plants.
c. dead humans. d. dead insects.

20. Both hair dryer and the electric water kettle produce…..energy.
a. chemical   b. thermal   c. light   d. potential

21. Some kinetic energy is converted into …………… energy due to friction of bike's tire with the road.
a. light   b. electrical   c. potential   d. thermal

22. We can use the energy obtained from burning of wood directly for all of the following purposes, except…………
a. warming houses.   b. operating television.
c. cooking food.   d. boiling water.

23. Extreme heat and pressure under the Earth's surface has an important role in forming……………
a. wood.   b. wind.   c. fossil fuel.   d. biofuel.

24. All forms of fossil fuel are formed ....
a) above the Earth's surface.   b) under the Earth's surface.
c) above the water surface.   d) in the air around us.

25. All the following are forms of fossil fuels, except ………….
a. water.   b. coal.   c. natural gas.   d. oil.

26. The steps of forming fossil fuel don't include………. of the remains of the living organisms.
a. decaying   b. cooling   c. burying   d. heating

27. Among the following resources, we must conserve …………
a) solar energy and coal.
b) solar energy and wind energy.
c) wind energy and oil.
d) oil and coal.

28. Both coal and charcoal …….
a) are renewable resources of energy.
b) are nonrenewable resources of energy.
c) are examples of biofuel.
d) produce thermal energy on burning.

29. Fossil fuels are characterized by all the following except ………
a) they have limited amount.
b) they produce thermal energy on burning.
c) they are renewable resources of energy.
d) they are nonrenewable resources of energy.

30. To conserve fossil fuels, we must do all the following actions, except……….
a) using energy-saving light bulbs.
b) using fossil fuels more than solar energy.
c) using bikes more than cars.
d) using renewable resources of energy more than fossil fuels.

31. If we don't conserve using fossil fuels, their amount will ………
a. not change on the Earth. b. increase on the Earth.
c. be constant on the Earth. d. run out on the Earth.

32. All the following are found deeply under the Earth's surface, except…………
a. natural gas. b. coal. c. green plants. d. oil.

33. All the following are used to generate electrical energy, except….
a. oil. b. natural gas. c. coal. d. glass.

34. Among the following resources, we must conserve …..
a. solar energy and coal. b. solar energy and wind energy.
c. wind energy and oil. d. oil and coal.

35. Inside the electric power station, heating of ……… produce steam.
a. generators b. water c. turbines d. fuel

36. Inside the electric power station, ……… used to covert kinetic energy into electric energy.
a. generators b. water c. turbines d. fuel

37. Electric wires are made of ……..
a. glass b. wood c. paper d. copper

Question 2

Choose from (A) what suits it in (B):

1.

(A)	(B)
1. The Sun. **2.** Fuel. **3.** Gasoline.	**a)** It is operated by electricity. **b)** Its light energy changes into chemical energy in plants. **c)** It is a liquid that can be used as fuel for cars. **d)** It is any substance that produces thermal energy when it is burned.

2.

(A)	(B)
1. Rocks and sediments **2.** water **3.** Oil	**a)** Is a liquid fossil fuel, that is used to produce electricity **b)** is a liquid biofuel, that is used to produce thermal energy in houses **c)** Is a liquid in electric power station that produce steam on heating which turns turbines **d)** Play a role in formation of fossil fuel

3.

(A)	(B)
1. Water. **2.** Wind energy. **3.** Coal.	**a)** It needs extreme heat and pressure to be formed from remains of dead plants. **b)** It is the main resource of energy on the Earth's surface. **c)** It is a gaseous renewable resource of energy. **d)** It is a liquid renewable resource of energy.

Question 3

Put (√) or (X):

1. Energy cannot be transformed from one form to another.
2. We can convert the solar energy into different forms of energy.

3. A toy car can continue moving even after its battery runs out.
4. Mars is located a few meters away from Earth.
5. Without electrical energy, Mars rover Curiosity cannot move or communicate with Earth.
6. Television needs sound energy to be operated.
7. Electrical energy is needed to operate an electric fan.
8. In electric power stations, sound energy produced from burning of coal is converted into electrical energy.
9. There is energy waste when energy is transformed from one form to another.
10. Energy can be destroyed inside some devices.
11. The electric bulb depends on chemical energy to operate.
12. Both the electric bulb and the electric heater produce thermal energy.
13. Some of the output energy does not help the device do the function for which it was designed.
14. The input energy in the hair dryer is chemical energy.
15. The output thermal energy from a hair dryer is considered wasted energy because it does not help the device do its main function.
16. The mobile phone stores electrical energy in its battery in the form of chemical energy.
17. The input energy in the hair dryer is chemical energy.
18. Coal is the main source of most energies on the Earth's surface

19.	Fuel is the substance that produces electrical energy on burning.
20.	The Sun is the main source of forming both biofuel and fossil fuel.
21.	The rate of usage of oil is slower than its rate of formation under the Earth's surface.
22.	We can make a liquid fuel from grass and wood chips.
23.	fossil fuels formed under the Earth's surface.
24.	The movement of a generator in an electric power station produces potential energy.
25.	Burning of fossil fuel inside electric power station produces kinetic energy.
26.	Turning off lights that we do not need is a way to conserve electricity.
27.	Oil, natural gas and coal can be used to produce electrical energy.
28.	Wind energy will run out faster than natural gas.
29.	As the speed of the car increases, the amount of used fuel decreases.
30.	Curiosity is a vehicle that travels across the surface of the planet Mars.

Question 4

Write the scientific term:

1. The source of energy in some toys that stores chemical energy.
2. The energy produced from batteries

3.A robotic vehicle designed to explore the planet of Mars.
4. The energy that Is stored in both batteries and food.
5.The wasted energy when using a mobile phone for a long time.
6.The energy that is produced from the electric power stations and flows through wires.
7.A form of energy produced from the electric lamp and affects our eyes.
8. They are fuels that were formed from remains of dead animals and plants under the Earth's surface
9. The energy that is produced from the blender and helps it do its job.
10. Energy can neither be created nor destroyed, but only converted from one form to another.
11. It is the main source of most forms of energy on the Earth's surface.
12. The form of energy that is produced as a result of burning wood and coal.
13. Natural resources of energy, that take a short period of time to be renewed.
14. Natural resources of energy that take a very long period of time to be formed.
15. It is a form of biofuel that can be made from some types of plants such as grass and wood chips.
16. The energy produced from playing guitar
17. It is a form of fossil fuel that was formed from remains of dead plants

Question 5

Complete the following sentences:

1.The energy can be…………from one form to another.
2.To operate an electric mixer we use …………energy.

3.When your cell phone is out of charge, you must recharge its …………..to operate it again.

4.On planet Mars, Curiosity robot is operated by using……….energy from sunlight that is converted into ………….. energy used to recharge its batteries.

5.The energy produced from the battery and used to operate a toy car is …………..energy.

6.When you press on the soap dispenser, ……….energy stored in its spring is converted into ………. energy that moves the soap upward.

7.When you rub your hands together, the …….. energy is converted into …………….energy.

8.The electric lamp converts electrical energy into …………. energy and …………..energy.

9.The change of electrical energy into sound energy in the radio is an example that proves the law of………

10. Energy can neither be…………. nor………….., but only…………… from one form to another.

11. Some forms of fuel can be used in cooking such as ………..,………..and …………

12. Coal, ……………….and ………. can be used in electric power stations to generate electricity.

13. Gasoline is burned inside a car engine to produce……..energy that is converted into …………energy which causes the movement of the car.

14. Turbines in electric power stations are turned by steam to produce ……………energy required to operate the ……………. of the electric power station

15. The mobile phone converts chemical energy stored in its battery into energy ………….

16. During generating electricity in electric power stations, the hot water produces ……….which is used to turn turbines.

17. In the electric heater, ……………. energy is considered as an input energy, while thermal energy is considered as……………. energy.

18. Water and .... …………are considered from ………..resources of energy

19. Different forms of fuel can be classified into two main types which are……………and…………

20. The natural resources that can be replaced shortly after being used are called ……………… resources of energy.

21. In the electric power stations, there is a device known as ……… that is used to convert the kinetic energy into electrical energy.

Question 6

Correct the underlined word:

1. The solar energy produced from the <u>moon</u> can be converted into different forms of energy.
2. Toy cars depend on <u>fuel</u> as a source of electrical energy.
3. Curiosity is a robotic vehicle that is designed to explore the surface of <u>moon</u>.
4. In houses, <u>gasoline</u> is used in cooking food as it is one of the oldest known biofuels.
5. The nonrenewable resources of energy take <u>a short</u> period of time to be formed under the Earth's surface.
6. <u>The moon</u> is the main source of both biofuel and fossil fuel.
7. We can use some <u>animals</u> to make a liquid biofuel.

8.	The rate of usage of fossil fuels must be <u>increased</u>.
9.	We can conserve oil by <u>increasing</u> the use of private vehicles.
10.	Fossil fuels include oil, coal and <u>wood.</u>
11.	After death of living organisms, their remains are buried under the Earth's surface and exposed to extreme pressure and <u>cool.</u>
12.	Water is a <u>nonrenewable</u> energy resource.
13.	The amount of <u>renewable resources</u> of energy are limited on Earth.
14.	In an electric power station, <u>water</u> turns turbines that produce kinetic energy.
15.	The amount of <u>biofuels</u> cannot be replaced as quickly as it is used.
16.	Wood is <u>a fossil fuel</u> that is used in warming houses.

Question 7

a) Look at the following figures, then put (✓) or (X)



Car (1) Mars rover Curiosity



Car (2) Toy car

1. The movement of the two cars can be controlled from a distance by using a remote control.
2. Car (2) uses sunlight to move.
3. The two cars can convert the chemical energy stored in their batteries into electrical energy.
4. We can use an electric cable to recharge the battery that is placed in car (1) again if it runs out.

b) Look at the following figures, then complete the following sentences:



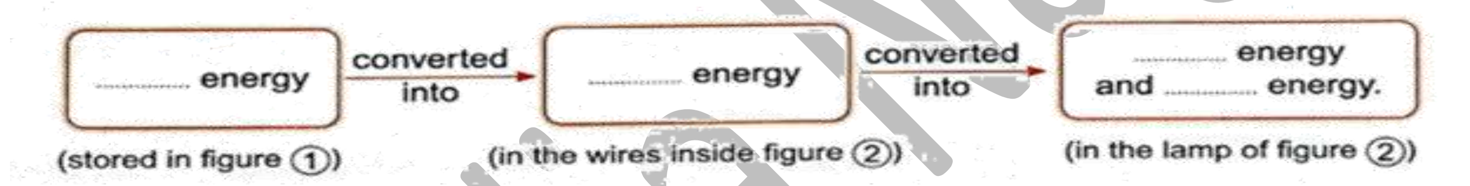


Figure (1)



Figure (2)

1. Figure (1) converts………. ….energy into………….. energy.
2. Figure (2) converts……….. energy into……. and …………. energy.
3. The energy chain that is produced due to inserting figure (1) inside figure (2) and turning it on is:



c) Look at the opposite picture, then choose the correct answer

1. Coal is a form of fuel, which is used in all the following purposes, except……….

a) cooking food.
b) operating cars.
c) generating electricity.
d) warming houses.

2. Coal is burned to produce …………

a. thermal energy.
b. sound energy.
c. natural gas.
d. wood of trees.

3. Coal and……………are used in warming houses.

a. water
b. plastic
c. sand
d. wood

d) Choose the correct answer according to your studying of how electric power stations work

1. To generate electricity inside electric power station we need to …………. the fuel.

a. cool   b. mix water with   c. burn   d. mix sand with

2. Steam in electric power station is produced as a result of…….

a. heating water   b. mixing water with fuel.

c. cooling water   d. cooling fuel.

3. On generating electricity inside electric power stations, ……….. is the first type of energy which is produced from burning of fuel.

a. electrical energy   b. thermal energy

c. potential energy   d. kinetic energy

4.The generator in electric power station changes………….energy into ………..energy.

a. electrical — kinetic   b. electrical — thermal

c. thermal — electrical   d. kinetic — electrical

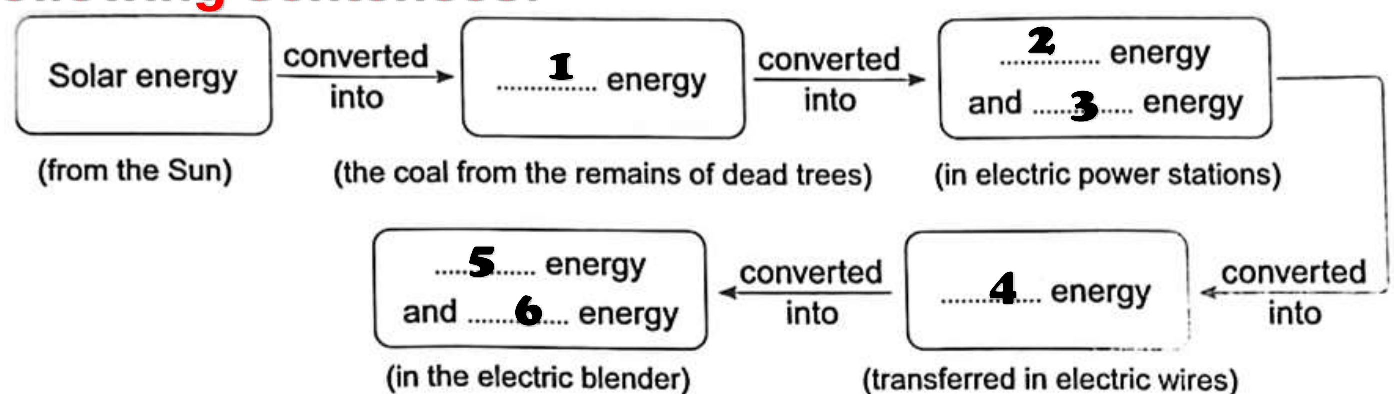
5.The movement of turbines produces………..energy.

a. kinetic   b. potential   c. chemical   d. hydropower

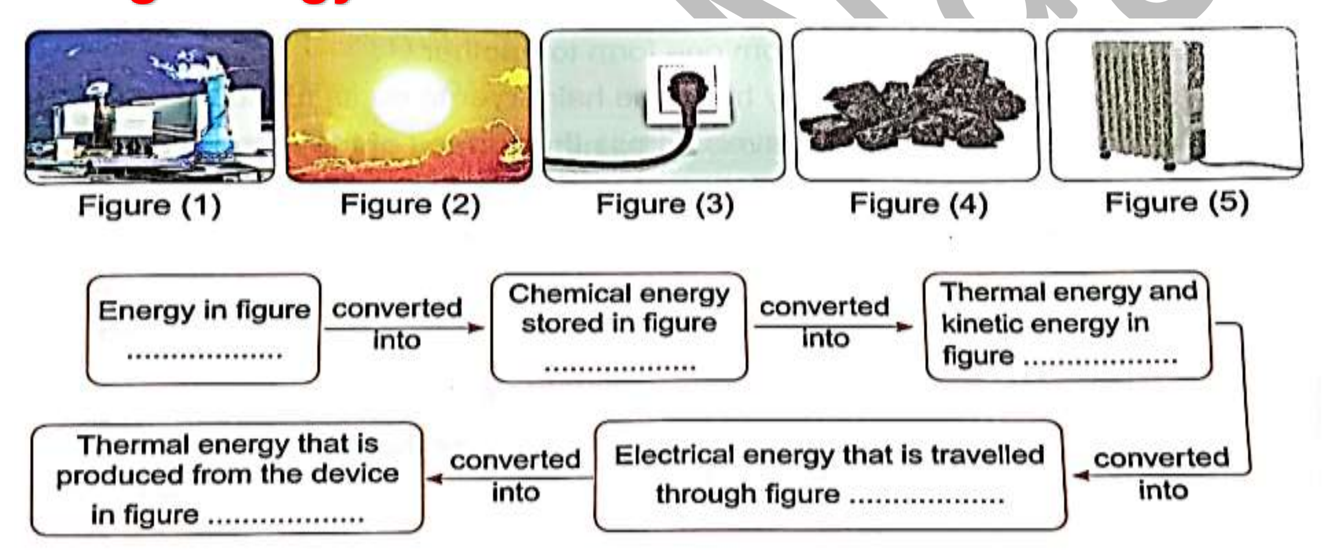
e) Arrange the following steps to show how electricity is generated in an electric power station and sent it to houses and factories:

a) ( ) Steam turns the turbine that produces kinetic energy.
b) ( ) Fuel is burned and produces thermal energy.
c) ( ) Electrical energy is sent to houses and factories.
d) ( ) Water becomes hot and produces steam.
e) ( ) Turbine turns the generator that produces electrical energy.

f) Look at the following figures, then complete the following sentences:



g) Look at the following figures, then complete the following energy chain:



Question 8 Give reasons for:

1. A remote-controlled toy car needs a battery to move from one place to another.

Because the chemical energy stored in battery is converted into electrical energy that changes into kinetic energy makes the car moves.

2. Some calculators use the sunlight to operate.

3. Because the energy of sunlight (solar energy) is converted into electrical energy which calculators use it to be operated.

4. You feel heat, when you put your hands near a electric lamp.

Because some of the electrical energy is converted into thermal energy.

5. Mars rover Curiosity operates for a long period of time on Mars without any need to be recharged.

Due to the presence of solar panels that use sunlight to recharge its batteries.

6. There is an energy change when you press the spring of a soap dispenser.

Because the potential energy stored in its spring is converted into kinetic energy that moves the soap upward.

7. When you rub your hands together, you feel warm.

Because the kinetic energy is converted into thermal energy.

8. Not all the energy that enters the energy chain completely reaches the device.

Because some of the energy is wasted in the form of heat.

9. The presence of batteries inside a toy car.

Because battery is the source of energy where the chemical energy is converted into electrical energy to operate the toy car.

10. Thermal energy in a mobile phone is considered as a wasted energy.

Because it doesn't help the mobile phone to do its main function.

11. The electrical energy that enters the hair dryer does not come out of the hair dryer in the same form of energy.

Because it is converted into kinetic, thermal and sound energies.

12. Sound energy and thermal energy are considered as wasted energy in the blender.

Because they don't help the blender to do its main function.

13. Sometimes the fuel indicator of a car goes down.

Because the fuel in the car tank runs out.

14. Gasoline is burned inside a car engine.

To produce thermal energy which changes into kinetic energy that causes the car to move.

15. Water and wind are renewable resources of energy.

Because they can be replaced shortly after being used.

16. Coal and gasoline are nonrenewable resources of energy.

Because they are used at a rate faster than they can be renewed.

17. Using wood of trees as a fuel has negative effects on the environment.

Because continuity of cutting down trees leads to deforestation.

18. Generators are important in electric power stations.

Because generators convert kinetic energy into electrical energy.

19. We must turn off lights that we do not need.

To conserve the electricity.

20. Fossil fuels cannot be replaced as quickly as they are used.

Because fossil fuels are formed over millions of years.

Question 9

What happen if:

1. To the car fuel indicator if the amount of gasoline in a car decrease

The car fuel indicator will go down.

2. To the car movement if fuel runs out in a car.

The car movement decreases gradually until it stops.

3. If people increase using the wood of trees as a source of fuel.

It leads to deforestation, which causes negative effects on the environment.

4. If the remains of dead living organisms were buried under the Earth's surface over millions of years.

They are converted into fossil fuel.

5. If decomposition of remains of sea animals under the Earth's surface.

They will form oil and natural gas.

6. To a generator that is connected to a damaged turbine in an electric power station.

Turbine cannot produce kinetic energy, so the generator will not turn and don't generate electricity.

7. To the movement of the turbine if the water in an electric power station is not heated.

Water will not produce steam, so the turbine will not move and all not produce kinetic energy.

8. If batteries of remote-controlled toy car run out.

The car will not move, so we can recharge its batteries by connecting toy car to a nearby charger or replacing old batteries with new ones.

9. If solar calculators were exposed to the sunlight.

Solar energy is converted into electrical energy that operate them.

10. If Mars rover Curiosity didn't get any sunlight on Mars surface.

It cannot be operated, because it depends on sunlight (solar energy) to

recharge its batteries.

11. To the change of energy when you turn on the television.

The electrical energy is converted into sound energy and light energy.

12. To the change of energy when you burn a piece of wood.

The chemical energy is converted into thermal energy and light energy.

13. To the change of energy when you shake a bell with your hand.

The kinetic energy is converted into sound energy.

14. If you put your hands near the lighted lamp.

You feel warm, because some electrical energy is converted into thermal

15. If you use a mobile phone for a long time. (according to the wasted energy).

Some energy is wasted as thermal energy.

16. If you turn on an electric fan.(according to the change of energy)

The electrical energy is converted into kinetic energy which do the main function of fan and sound energy as wasted energy

Answers

Question Choose:

1) a	2) d	3) b	4) c	5) c
6) b	7) c	8) d	9) a	10) c
11) b	12) b	13) d	14) b	15) d
16) a	17) b	18) d	19) b	20) b
21) d	22) b	23) c	24) b	25) a
26) b	27) d	28) d	29) c	30) b
31) d	32) c	33) d	34) d	35) b
36) a	37) d			

Question 2 Choose from (A) what suits it in (B):

1. **1. b** **2.d** **3.c**
2. **1. d** **2.c** **3.a**
3. **1.d** **2.c** **3.a**

Question 3 Put (✓) or (X)

1. X	7. ✓	13. ✓	19. X	25. X
2. ✓	8. X	14. X	20. ✓	26. ✓
3. X	9. ✓	15. X	21. X	27. ✓
4. X	10. X	16. ✓	22. ✓	28. X
5. ✓	11. X	17. X	23. ✓	29. X
6. X	12. ✓	18. X	24. X	30. ✓

Question 4 Write the scientific term:

1.Battery
2.Electricity
3.Mars rover Curiosity
4.Chemical energy
5.Thermal energy
6.Electric energy
7.Light energy
8.Fossil fuel
9.Kinetic energy
10. Law of conservation of energy
11. The Sun
12. Thermal energy
13. Renewable resource of energy
14. Nonrenewable resources of energy
15. Liquid fuel
16. Sound energy
17. Coal

Question 5 Complete the following sentences:

1. Converted/changed
2. Electrical
3. Battery
4. Solar (light) – electrical
5. Electrical
6. Potential -kinetic
7. Kinetic – thermal
8. Light -thermal
9. Conservation of energy
10. Created -destroyed-converted
11. Coal – wood – natural gas
12. Oil – natural gas
13. Thermal – kinetic
14. Kinetic- generators
15. Electric
16. Steam
17. Electrical – output
18. Solar energy-renewable
19. Biofuel – fossil fuel
20. Renewable
21. Generators

Question 6 Correct the underlined word:

1. The Sun
2. Battery
3. Mars
4. Wood
5. A long
6. The Sun
7. Plants
8. Decreased
9. Decrease
10. Natural gas
11. Heat
12. Renewable
13. Nonrenewable
14. Steam
15. Fossil fuel
16. Biofuel

Question 7

Study the following figure then complete the sentences below:

a) 1. ✓ 2. X 3. ✓ 4. X

b) 1. Chemical- electrical
2.elecrical -light-thermal
3. chemical – electric -light – thermal

c) 1. b 2. a 3. d

d) 1. c 2. a 3.b 4. d 5.a

e) 3-1-5-2-4

f) 1. Chemical 2. thermal 3. kinetic 4. electric 5. kinetic 6. sound

g) fig 2 ➝fig 4➝ fig 1 ➝ fig 3➝ fig 5

Question 1: Choose the correct answer.

1-The energy source in a toy car is.

a) engine
b) tires
c) battery
d) fuel

2- curiosity rover is designed to explore

a) Earth
b) Mars
c) Sun
d) Moon

3- the electrical energy changes in the hair dryer into ………… and ………. Energies

a) Sound - thermal
b) Kinetic - light
c) Thermal - light
d) Light - sound

4- electrical energy changes inside a light bulb into ………… and ………… energies

a) Sound-light
b) Sound-thermal
c) Kinetic- light
d) Light-thermal

5- when a piece of coal is burnt, ………. Energy is produced.

a) Thermal
b) Kinetic
c) Sound
d) Potential





6- The …………. objects change electric energy into light and sound energies.

a) Cellular phone
b) Television
c) Radio
d) A and b

7- light energy is produced from all the following devices, except the

a) Cellular phone
b) Television
c) Radio
d) Electric lamp

8-curioity is the most famous …. on Mars

a) Application
b) Space craft
c) Robot
d) Rocket

9-space craft takes several ……. To travel from Earth to Mars

a) Seconds
b) Minutes
c) Days
d) Months

10- the electrical energy changes in the electric water kettle into ……. Energy that can warm the cold water inside.

a) Sound
b) Thermal
c) Light
d) Kinetic





11- Hair dryer and water kettle produce ……… energy

a) Chemical
b) Thermal
c) Light
d) Potential

12- due to the friction of bike's tire with the road, some kinetic energy is converted into ……. energy

a) Light
b) Electrical
c) Potential
d) Thermal

13-green plants can convert the light energy of the sun into ……… energy which is stored inside the plant in the form of sugar

a) Sound
b) Thermal
c) Light
d) Chemical

14-which form of energy is not used or produced when you turn on an electric bulb

a) Sound
b) Thermal
c) Light
d) Electrical

15- which sentences shows the energy changes in the flashlight in a correct order

a) Chemical-electrical- light
b) Chemical-light-electrical
c) Electrical-chemical-light
d) Light-chemical-electrical

16-when you eat an orange, your body converts the ……… energy stored inside the orange to ………. energy when you move.

a) Chemical-electrical
b) Kinetic- chemical
c) Electrical- chemical
d) Chemical- kinetic

17- when you use the handbell, the ……… energy changes into sound energy

a) Light
b) Thermal
c) Kinetic
d) Electric

18-you feel warm when you rub your hands together, because ……. energy is converted into thermal energy.

a) Kinetic
b) Light
c) Electrical
d) Sound

19-the output energy when playing drums is the ……… energy

a) Chemical
b) Light
c) Sound
d) Potential

20- during the running of a player, the chemical energy inside his body is converted into ……. And ……. energies

a) Potential-light
b) Kinetic- light
c) Thermal-kinetic
d) Thermal- light

21- In the battery of a toy car ……… energy changes into electrical energy

a) Chemical
b) Sound
c) Light
d) Thermal

22- …………. Is the main source of fuel?

a) Wind
b) Sun
c) Waterfalls
d) Wood

23- ……… is not an example of fossil fuel

a) Petroleum
b) Natural gas
c) Coal
d) Wood

24- cars need ……. to move

a) Water
b) Food
c) Fuel
d) No correct answer

25- ………… is a non-renewable source of energy

a) Wind
b) Sun
c) Biofuel
d) Coal

26-All the following are found deeply under the earth's surface, except ……….

a) Green plants
b) Oil
c) Natural gas
d) Coal

27- ancient people use……. As a form of fuel, before discovering gasoline

a) Water
b) Electricity
c) Wood
d) Wind

28- coal is formed under the earth's surface from the remains of

a) Dead animals
b) Dead humans
c) Dead plants
d) Dead insects

29-the non-renewable resources of energy resources, take ………. To be formed

a) A short period of time
b) Few hours
c) Few minutes
d) A very long period of time





30-Remains of living organisms that were buried under the Earth's surface must be affected by…… to form fossil fuel.

A) low pressure and high temperature
B) high pressure and low temperature
C) low pressure and low temperature
D) high pressure and high temperature

31-All the following factors play an important role in the formation of fossil fuel, except ....

a. extreme pressure
b. extreme heat
c. The moon lights.
d. Rocks and sediments

32-All forms of fossil fuel are formed ....

a. Above the Earth's surface.
b. under the Earth's surface.
c. above the water surface.
d. in the air around us.

33-All the following are forms of fossil fuel, except ....

a. water
b. coal.
c. natural gas.
d. oil.

34- The steps of forming fossil fuel, do not include .... of the remains of the Living organisms.

a. decaying
b. cooling
c. burying
d. heating

35- Inside the electric power station, heating of .... produces steam.

a. turbines
b. generators
c. water
d. fuel

36-We must……. fossil fuel first, to obtain energy.

a. wash
b. cook
c. cool
d. burn

37-Fossil fuels need…… to be formed under the Earth's surface.

a. Five years
b. hundreds of years
c. ten years
d. millions of years

38-Both coal and charcoal ....

a. are renewable resources of energy.
b. are non-renewable resources of energy.
c. are examples of biofuel.
d. produce thermal energy on burning.

Question 2: Put true or false.

1. Energy cannot be transformed from one form to another ( )
2. We can convert solar energy into different forms of energy ( )
3. We can continue to move a toy car even after its battery runs out ( )
4. Curiosity is a vehicle that travels across the surface of the planet mars ( )
5. Mars is located a few meters away from earth ( )
6. Curiosity robot needs sound energy to be operated ( )
7. Without electrical energy mars rover curiosity cannot move or communicate with earth ()
8. In the soap dispenser potential energy changes into kinetic energy ( )
9. In the electrical blender sound energy changes into electrical energy and kinetic energy
10. Most of the energy chains start with the moon ( )
11. The electric lamp is the primary source of most energies on the earth ( )
12. Light energy from the sun causes trees to grow ( )
13. The electric iron converts electrical energy into thermal energy ( )
14. Both hairdryer and washing machine depend on the same kind of energy to be operated ( )
15. The input energy in a hairdryer is the chemical energy ( )
16. The solar vehicles change sound energy to kinetic energy ( )
17. Mars rover curiosity can be operated from a distance ( )
18. The stored energy in batteries is the light energy ( )
19. In the electrical power stations, the sound energy produced from burning coal can be changed into electrical energy ( )
20. There is energy loss when energy is transformed from one form to another ( )
21. Energy can be destroyed inside some devices ( )
22. Electric bulb depends on chemical energy to be operated ( )

23. Both the electric bulb and electric heater produce thermal energy ( )
24. There is stored chemical energy inside the food we eat ( )
25. As a result of friction between the bike's tire and the road, kinetic energy changes into chemical energy ( )
26. When pedaling a bike, the chemical energy in your body changes into kinetic energy ( )
27. Energy cannot be changed from one form to another ( )
28. Some of the converted energy does not help some devices to do the function for which it was designed ( )
29. The only form that cannot be stored is the thermal energy ( )
30. The produced sound energy helps the hairdryer to do its function ( )
31. As the speed of the car increases the amount of used fuel decreases ( )
32. It is better before making a trip by a car we must check the amount of gasoline in the fuel tank ( )
33. You need gasoline to move a bicycle ( )
34. Both coal and wood produce energy when burning them ( )
35. We cannot drive a car that does not contain fuel ( )
36. Biofuel is one of the nonrenewable resources of energy ( )
37. Extreme cooling under the earth's surface helps in the formation of oil ( )
38. Water and gasoline are two renewable resources of energy ( )
39. The consumption of oil is slower than its formation under the earth's surface ( )
40. The sun is the primary source of forming both biofuel and fossil fuel ( )
41. We can make liquid fuel from grass and wood chips ( )
42. Burning of fossil fuel inside electric power station produces potential energy. ( )
43. The movement of a generator in electric power station produces potential energy. ( )





Question 4: Write the scientific term.

1. The type of fuel that is used inside the electric power station to produce electricity.
2. The device in the electric power station, that produces kinetic energy to operate generators.
3. The matter that produces steam on heating, which is used to turn turbines in electric power stations.
4. The device in the electric power station, that turns kinetic energy into electrical energy.
5. The liquid that stores chemical energy, and it is used to move cars.
6. The source of energy in some toys that stores chemical energy.
7. The energy produced from batteries.
8. A robotic vehicle which is designed to explore the surface of mars.
9. The energy used to operate a television
10. The main source of energy for most forms of energies on earth
11. The energy produced when the wood of trees is burned
12. It is produced from the remains of dead trees buried under the Earth's surface over millions of years
13. The energy stored inside the coal.
14. The energy produced from the electric lamp and affects our eyes.
15. Energy can neither be created not destroyed, but only converted from one form to another.
16. The energy produced from playing guitar.
17. The energy used to play a drum.
18. The energy that is produced from the blender and helps it in doing its job.
19. The output energy of the washing machine which helps it to do its main function.
20. The wasted energy when using a mobile phone for a long time.




21. It is any substance which produces thermal energy on burning.
22. Natural resources of energy, that take a very long period of time to be formed.
23. It is a form of biofuel, that can be made from some types of plants such as grass and wood chips.
24. They are fuels that are produced from remains of dead animals and plants under the Earth's surface.
25. It is a type of fossil fuel that is produced from dead marine animals.

Question 5 complete the following sentences.

1. The energy can be ………… from one form to another.
2. Remote controlled toy cars changes ………. energy stored in their batteries to …………. energy that in turn changes to …………. or ………. energy
3. To operate an electric mixer, we use ………. energy
4. When your cell phone is out of charge, you must recharge its …………. To operate it again
5. Some calculators can change solar energy to ……… energy by using sunlight.
6. On Mars, rover curiosity robot can be operated for a long period of time by using ………. Energy from sunlight that is converted into ………… energy used to recharge its batteries
7. When you press the soap dispenser, you turn the ………… energy stored in its spring to ……. Energy that moves the soap upward
8. The energies that are produced from the washing machine are ………. that is important for its use and ………, ……. that are wasted energies.
9. When you rub your hand together, ……….. energy is converted to ………. energy





10. In any energy chain, some of the energy is lost in the form of ………….
11. The electric lamp converts electrical energy into ……… energy and ……... energy
12. The ……. is the primary source of energy that is transferred to the food in the form of chemical energy
13. When you ride a bicycle, the ……… energy stored in your body is converted into ……… energy which causes the bicycle to move and …………. Energy due to the friction of its tires with the road
14. The change of electrical energy into sound energy in the radio is an example that proves the law of ………...
15. Energy can neither be ………. Nor ………., but only ………. from one form to another
16. The mobile phone converts chemical energy stored in its battery into ………. Energy and ……. Energy and after using it along time some energy is lost in the form of ……. energy
17. The input energy of a hair dryer is ………... energy while the output energy is ………, ……... and ……… energies.
18. The kinetic energy in a hand bell is considered as ………. energy while in electric fan is considered as ……… energy.
19. Gasoline burns inside a car engine to produce ……... energy that is changed into ………. energy which caused the movement of the car
20. Some forms of fuel can be used in cooking such as ………., ………... and ……….
21. Coal, ……. and ………. Can be used in electric power stations to generate electricity.
22. We can use some forms of fuel such as ………. and ………… in warming houses
23. The natural resources that can be replaced shortly are called …………. resources of energy, while those that are consumed at a





rate faster than they can be renewed are called ………… resources of energy

24. Different forms of fuel can be classified into two main types which are ……… that is produced from living organisms that can be planted and ………. That are produced from animals or plants.
25. Wood and ……….. are examples of biofuel while ………. and ………. are examples of fossil fuel
26. Wood chips and grass can be used to make a ……….. biofuel.
27. In electric power stations, we use fossil fuel such as oil and natural gas which are considered as .... resources of energy.
28. When fuel is burned in an electric power station, it produces...........energy to heat water.
29. During generating electricity in electric power stations, the hot water produces .... which is used to turn turbines.
30. Turbines in electric power stations are turned by steam and they produce .... energy to run the .... of the electric power stations.
31. Inside electric power stations, the burning of fuel produces……… energy, while the movement of turbines produces …………. energy.

Question 6 Give reason for each of the following.

1. The importance of generators in electric power stations.
2. The used amount of fossil fuel cannot be replaced as quickly as it is consumed.
3. A remote-controlled toy car needs battery to move from one place to another
4. Some calculators use the sunlight to be operated.
5. Mars rover curiosity was operated for long period of time on Mars without any need to be charged.
6. When you press on the spring of soap dispenser, the soap moves upward.

7. Not all the energy that enters the energy chain reaches the device completely.
8. Thermal energy in mobile phone is considered as a wasted energy.
9. coal and gasoline are considered as nonrenewable resources of energy.
10. The importance of wood and coal in our houses
11. Using wood of trees as a fuel has negative effects on the environment

Question 7: What happens if.

1. There is damage happens in a turbine connected to a generator in an electric power station.
2. The water in an electric power station is not heated.
3. You turn on the T.V (according to the change of energy)
4. you burn a piece of wood (according to the change of energy)
5. you put your hands near the lighted lamp.
6. The amount of gasoline in a car decrease (according to the car fuel indicator)
7. The remains of dead living organisms were buried under the Earth's surface over millions of years.
8. Decomposition of remains of marine animals under the Earth's surface

Question 1: Choose the correct answer.

1-The energy source in a toy car is.

a) engine
b) tires
c) battery
d) fuel

2- curiosity rover is designed to explore

a) Earth
b) Mars
c) Sun
d) Moon

3- the electrical energy changes in the hair dryer into ………… and ………. Energies

a) Sound - thermal
b) Kinetic - light
c) Thermal - light
d) Light - sound

4- electrical energy changes inside a light bulb into ………… and ………… energies

a) Sound-light
b) Sound-thermal
c) Kinetic- light
d) Light-thermal

5- when a piece of coal is burnt, ………. Energy is produced.

a) Thermal
b) Kinetic
c) Sound
d) Potential




6- The …………. objects change electric energy into light and sound energies.

a) Cellular phone
b) Television
c) Radio
d) A and b

7- light energy is produced from all the following devices, except the

a) Cellular phone
b) Television
c) Radio
d) Electric lamp

8-curioity is the most famous …. on Mars

a) Application
b) Space craft
c) Robot
d) Rocket

9-space craft takes several ……. To travel from Earth to Mars

a) Seconds
b) Minutes
c) Days
d) Months

10- the electrical energy changes in the electric water kettle into ……. Energy that can warm the cold water inside.

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b) Thermal
c) Light
d) Kinetic

11- Hair dryer and water kettle produce ……… energy

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b) Thermal
c) Light
d) Potential

12- due to the friction of bike's tire with the road, some kinetic energy is converted into ……. energy

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13-green plants can convert the light energy of the sun into ……… energy which is stored inside the plant in the form of sugar

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b) Thermal
c) Light
d) Chemical

14-which form of energy is not used or produced when you turn on an electric bulb

a) Sound
b) Thermal
c) Light
d) Electrical

15- which sentences shows the energy changes in the flashlight in a correct order

a) Chemical-electrical- light
b) Chemical-light-electrical
c) Electrical-chemical-light
d) Light-chemical-electrical





16-when you eat an orange, your body converts the ……… energy stored inside the orange to ………. energy when you move.

a) Chemical-electrical
b) Kinetic-chemical
c) Electrical-chemical
d) Chemical- kinetic

17- when you use the handbell, the ……… energy changes into sound energy

a) Light
b) Thermal
c) Kinetic
d) Electric

18-you feel warm when you rub your hands together, because ……. energy is converted into thermal energy.

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b) Light
c) Electrical
d) Sound

19-the output energy when playing drums is the ……… energy

a) Chemical
b) Light
c) Sound
d) Potential

20- during the running of a player, the chemical energy inside his body is converted into ……. And ……. energies

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b) Kinetic- light
c) Thermal-kinetic
d) Thermal- light

21- In the battery of a toy car ……… energy changes into electrical energy

a) Chemical
b) Sound
c) Light
d) Thermal

22- …………. Is the main source of fuel?

a) Wind
b) Sun
c) Waterfalls
d) Wood

23- ……… is not an example of fossil fuel

a) Petroleum
b) Natural gas
c) Coal
d) Wood

24- cars need ……. to move

a) Water
b) Food
c) Fuel
d) No correct answer

25- ………… is a non-renewable source of energy

a) Wind
b) Sun
c) Biofuel
d) Coal





26-All the following are found deeply under the earth's surface, except ……….

a) Green plants
b) Oil
c) Natural gas
d) Coal

27- ancient people use……. As a form of fuel, before discovering gasoline

a) Water
b) Electricity
c) Wood
d) Wind

28- coal is formed under the earth's surface from the remains of

a) Dead animals
b) Dead humans
c) Dead plants
d) Dead insects

29-the non-renewable resources of energy resources, take ………. To be formed

a) A short period of time
b) Few hours
c) Few minutes
d) A very long period of time

30-Remains of living organisms that were buried under the Earth's surface must be affected by...... to form fossil fuel.

A) low pressure and high temperature
B) high pressure and low temperature
C) low pressure and low temperature
D) high pressure and high temperature

31-All the following factors play an important role in the formation of fossil fuel, except ....

a. extreme pressure
b. extreme heat
c. The moon lights.
d. Rocks and sediments

32-All forms of fossil fuel are formed ....

a. Above the Earth's surface.
b. under the Earth's surface.
c. above the water surface.
d. in the air around us.

33-All the following are forms of fossil fuel, except ....

a. water
b. coal.
c. natural gas.
d. oil.

34- The steps of forming fossil fuel, do not include .... of the remains of the Living organisms.

a. decaying
b. cooling
c. burying
d. heating

35- Inside the electric power station, heating of .... produces steam.

a. turbines
b. generators
c. water
d. fuel

36-We must....... fossil fuel at first, to obtain energy.

a. wash
b. cook
c. cool
d. burn

37-Fossil fuels need...... to be formed under the Earth's surface.

a. Five years
b. hundreds of years
c. ten years
d. millions of years

38-Both coal and charcoal ....

a. are renewable resources of energy.
b. are non-renewable resources of energy.
c. are examples of biofuel.
d. produce thermal energy on burning.

Question 2: Put true or false.

1. Energy cannot be transformed from one form to another (F)
2. We can convert solar energy into different forms of energy (T)
3. We can continue to move a toy car even after its battery runs out (F)
4. Curiosity is a vehicle that travels across the surface of the planet mars (T)
5. Mars is located a few meters away from earth (F)
6. Curiosity robot needs sound energy to be operated (F)
7. Without electrical energy mars rover curiosity cannot move or communicate with earth (T)
8. In the soap dispenser potential energy changes into kinetic energy (T)
9. In the electrical blender sound energy changes into electrical energy and kinetic energy (F)
10. Most of the energy chains start with the moon (F)
11. The electric lamp is the primary source of most energies on the earth (F)
12. Light energy from the sun causes trees to grow (T)
13. The electric iron converts electrical energy into thermal energy (T)
14. Both hairdryer and washing machine depend on the same kind of energy to be operated (T)
15. The input energy in a hairdryer is the chemical energy (F)
16. The solar vehicles change sound energy to kinetic energy (F)
17. Mars rover curiosity can be operated from a distance (T)
18. The stored energy in batteries is the light energy (F)
19. In the electrical power stations, the sound energy produced from burning coal can be changed into electrical energy (F)
20. There is energy loss when energy is transformed from one form to another (T)
21. Energy can be destroyed inside some devices (F)
22. Electric bulb depends on chemical energy to be operated (F)





23. Both the electric bulb and electric heater produce thermal energy (T)
24. There is stored chemical energy inside the food we eat (T)
25. As a result of friction between the bike’s tire and the road, kinetic energy changes into chemical energy (F)
26. When pedaling a bike, the chemical energy in your body changes into kinetic energy (T)
27. Energy cannot be changed from one form to another (F)
28. Some of the converted energy does not help some devices to do the function for which it was designed (T)
29. The only form that cannot be stored is the thermal energy (F)
30. The produced sound energy helps the hairdryer to do its function (F)
31. As the speed of the car increases the amount of used fuel decreases (F)
32. It is better before making a trip by a car we must check the amount of gasoline in the fuel tank (T)
33. You need gasoline to move a bicycle (F)
34. Both coal and wood produce energy when burning them (T)
35. We cannot drive a car that does not contain fuel (T)
36. Biofuel is one of the nonrenewable resources of energy (F)
37. Extreme cooling under the earth's surface helps in the formation of oil (F)
38. Water and gasoline are two renewable resources of energy (F)
39. The consumption of oil is slower than its formation under the earth’s surface (F)
40. The sun is the primary source of forming both biofuel and fossil fuel (T)
41. We can make liquid fuel from grass and wood chips (T)
42. Burning of fossil fuel inside electric power station produces potential energy. (F)
43. The movement of a generator in electric power station produces potential energy. (F)




Question 4: Write the scientific term.

1. The type of fuel that is used inside the electric power station to produce electricity. Fossil fuel
2. The device in the electric power station, that produces kinetic energy to operate generators. turbine
3. The matter that produces steam on heating, which is used to turn turbines in electric power stations. water
4. The device in the electric power station, that turns kinetic energy into electrical energy. Generator
5. The liquid that stores chemical energy, and it is used to move cars. Fuel
6. The source of energy in some toys that stores chemical energy. battery
7. The energy produced from batteries. Electrical energy
8. A robotic vehicle which is designed to explore the surface of mars. Mars rover curiosity
9. The energy used to operate a television Electrical energy
10. The main source of energy for most forms of energies on earth Sun
11. The energy produced when the wood of trees is burned thermal energy
12. It is produced from the remains of dead trees buried under the Earth's surface over millions of years coal
13. The energy stored inside the coal. Chemical energy
14. The energy produced from the electric lamp and affects our eyes. light energy
15. Energy can neither be created not destroyed, but only converted from one form to another. Law of conservation of energy
16. The energy produced from playing guitar. Sound energy
17. The energy used to play a drum. Kinetic energy





18. The energy that is produced from the blender and helps it in doing its job. kinetic energy
19. The output energy of the washing machine which helps it to do its main function. Electrical energy
20. The wasted energy when using a mobile phone for a long time. Thermal energy
21. It is any substance which produces thermal energy on burning. fuel
22. Natural resources of energy, that take a very long period of time to be formed. Nonrenewable energy resources
23. It is a form of biofuel, that can be made from some types of plants such as grass and wood chips. Liquid fuel
24. They are fuels that are produced from remains of dead animals and plants under the Earth's surface. Fossil fuels
25. It is a type of fossil fuel that is produced from dead marine animals. Oil and natural gas

Question 5 complete the following sentences.

1. The energy can be …changed……… from one form to another.
2. Remote controlled toy cars changes …chemical……. energy stored in their batteries to …electrical……… energy that in turn changes to …kinetic……… or …sound……. energy
3. To operate an electric mixer, we use …electrical……. energy
4. When your cell phone is out of charge, you must recharge its …battery……… To operate it again
5. Some calculators can change solar energy to …electrical…… energy by using sunlight.
6. On Mars, rover curiosity robot can be operated for a long period of time by using …solar……. Energy from sunlight that is converted into ……electrical…… energy used to recharge its batteries





7. When you press the soap dispenser, you turn the …potential……… energy stored in its spring to …kinetic…. Energy that moves the soap upward
8. The energies that are produced from the washing machine are …kinetics……. that is important for its use and …sound…, …thermal…. that are wasted energies.
9. When you rub your hand together, …kinetic…….. energy is converted to …thermal……. energy
10. In any energy chain, some of the energy is lost in the form of ……heat…….
11. The electric lamp converts electrical energy into …light…… energy and …thermal…..... energy
12. The …sun…. is the primary source of energy that is transferred to the food in the form of chemical energy
13. When you ride a bicycle, the …chemical…… energy stored in your body is converted into …kinetic…… energy which causes the bicycle to move and ……thermal……. Energy due to the friction of its tires with the road
14. The change of electrical energy into sound energy in the radio is an example that proves the law of …conservation of energy……...
15. Energy can neither be …created……. Nor …destroyed……., but only …changes……. from one form to another
16. The mobile phone converts chemical energy stored in its battery into …light……. Energy and …sound…. Energy and after using it along time some energy is lost in the form of thermal……. energy
17. The input energy of a hair dryer is …electrical…….. energy while the output energy is …sound……, …thermal…... and …kinetic…… energies.
18. The kinetic energy in a hand bell is considered as …input……. energy while in electric fan is considered as …output…… energy.

19. Gasoline burns inside a car engine to produce …thermal…... energy that is changed into …kinetic……. energy which caused the movement of the car
20. Some forms of fuel can be used in cooking such as …wood……., …coal……... and …natural gas…….
21. Coal, …oil…. and …natural gas……. Can be used in electric power stations to generate electricity.
22. We can use some forms of fuel such as …wood……. and …coal……… in warming houses
23. The natural resources that can be replaced shortly are called ……renewable……. resources of energy, while those that are consumed at a rate faster than they can be renewed are called ……non renewable……. resources of energy
24. Different forms of fuel can be classified into two main types which are …biofuel…… that is produced from living organisms that can be planted and …fossil fuel……. That are produced from animals or plants.
25. Wood and …charcoal……... are examples of biofuel while …coal……. and …oil……. are examples of fossil fuel
26. Wood chips and grass can be used to make a …liquid……... biofuel.
27. In electric power stations, we use fossil fuel such as oil and natural gas which are considered as ....non renewable......... resources of energy.
28. When fuel is burned in an electric power station, it produces...thermal.........energy to heat water.
29. During generating electricity in electric power stations, the hot water produces ......steam........... which is used to turn turbines.
30. Turbines in electric power stations are turned by steam and they produce ....kinetic............. energy to run the ......generator........... of the electric power stations.



31. Inside electric power stations, the burning of fuel produces...thermal....... energy, while the movement of turbines produces ...kinetic.......... energy.

Question 6 Give reason for each of the following.

1. The importance of generators in electric power stations.
   Because generators convert kinetic energy to electrical energy
2. The used amount of fossil fuel cannot be replaced as quickly as it is consumed.
   Because they are used faster than they can be renewed (non renewable)
3. A remote-controlled toy car needs battery to move from one place to another
   Because the chemical energy stored in the battery is converted to electrical energy then to kinetic energy that moves the car
4. Some calculators use the sunlight to be operated.
   Because they have solar panels that convert solar energy into electrical energy to be operated
5. Mars rover curiosity was operated for long period of time on Mars without any need to be charged.
   Because the presence of solar panels that used the solar energy to charge its batteries
6. When you press on the spring of soap dispenser, the soap moves upward.
   Because the potential energy stored in the spring is converted into kinetic energy
7. Not all the energy that enters the energy chain reaches the device completely.
   Because some of the energy is wasted in the form of heat





8. Thermal energy in mobile phone is considered as a wasted energy.
   Because it doesnot help the device to do its main function
9. coal and gasoline are considered as nonrenewable resources of energy.
   Because they take millions of years to be formed so they are consumed faster than they are renewed
10. The importance of wood and coal in our houses
    Because they are used in warming and cooking
11. Using wood of trees as a fuel has negative effects on the environment
    Because cutting down trees rapidly causes deforestation

Question 7: What happens if.

1. There is damage happens in a turbine connected to a generator in an electric power station.
   Turbine cannot produce kinetic energy so generator will not produce electrical energy
2. The water in an electric power station is not heated.
   Water will not produce steam so turbines will not move or produce kinetic energy
3. You turn on the T.V (according to the change of energy)
   Electrical energy is changed to sound and light energies
4. you burn a piece of wood (according to the change of energy)
   chemical energy is changed to thermal energy
5. you put your hands near the lighted lamp.
   You will feel the heat of the lamp
6. The amount of gasoline in a car decrease (according to the car fuel indicator)
   The fuel indicator will go down
7. The remains of dead living organisms were buried under the Earth's surface over millions of years.


Fossil fuel is formed

8. Decomposition of remains of marine animals under the Earth's surface

Oil and natural gas are formed



